

THE
MEDICAL EXAMINER.

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NOTICE TO CORRESPONDENTS.

Communications and Books for notice should be addressed to the Editors, care of Messrs. Lindsay & Blakiston.

Letters, &c., connected with the *business affairs* of the Journal should be addressed to the Publishers.

Papers for publication must be received *before* the 16th of the month, or they cannot appear in the forthcoming number.

The following Journals have been received in exchange:

Philadelphia Medical News, June.
New York Medical Gazette, ditto.
New York Medical Times, ditto.
American Medical Monthly, ditto.
Medical Reporter, July.
New Jersey Medical Reporter, June.
Nelson's American Lancet, ditto.
Boston Medical and Surgical Journal, (weekly.)
Buffalo Medical Journal, ditto.
Virginia Stethoscope, ditto.
Virginia Medical and Surgical Journal, No. 14.
New Hampshire Journal of Medicine, June.
Upper Canada Journal, ditto.
Montreal Monthly Journal, ditto.
Western Journal of Medicine and Surgery, May.
Southern Journal of Medical and Physical Sciences, ditto.
Nashville Journal of Medicine and Surgery, June.
Kentucky Recorder, May.
Western Lancet, June.
Peninsular Journal, ditto.
St. Louis Medical and Surgical Journal, May.
Indiana Medical Journal, June.
Pharmaceutical Journal, May and June.
New York Journal of Pharmacy, June.
Edinburgh Monthly Journal of Medical Science, May and June.
London Lancet.
London Medical Times and Gazette.
Dublin Quarterly, May.
Dublin Medical Press.
Archives de Physiologie, January.
Archives d'Ophthalmologie, Feb. and March.
Gazette Medicale de Paris, Feb., March and April.
Revue-Medico-Chirurgicale de Paris, Feb., March and April.
El Porvenir Medico.

BOOKS AND PAMPHLETS RECEIVED.

Pathology and Treatment of Stricture of the Urethra. By Henry Thompson, F.R.C.S.

Epilepsy, and Other Affections of the Nervous System. By Chas. B. Radcliffe, M.D.

Universal Formulary. New edition, revised by R. P. Thomas, M.D.

Institutions for the Insane. By Pliny Earle, M.D.

Earle on Blood-letting in Insanity.

History of the Epidemic Yellow Fever. By E. S. Fenner, M.D.

Medical Transactions of the State of Alabama.

Medical Transactions of the Iowa State Society.

The foreign correspondents of the Examiner will please direct their Exchanges, Books for review, and other communications, to the care of Trubner & Co., No. 12 Paternoster Row, London, or Mr. H. Bosange, 21 Bis, Quai Voltaire, Paris.

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THE
MEDICAL EXAMINER.

NEW SERIES.—NO. CXV.—JULY, 1854.

ORIGINAL COMMUNICATIONS.

Electricity as a Cause of Disease. By S. LITTELL, M. D., Surgeon to Wills Hospital for Diseases of the Eye.

In no department of medicine is there more crude and unfounded theory than that which treats of the etiology of disease. The opinions prevalent on this subject are, indeed, hardly creditable to us as members of a learned profession, because they prove that we have not been guided in our reasoning by sound principles of philosophy. Simplicity is found to be an attribute of the ALMIGHTY in all the operations of His hand; we are amazed at the variety and diversity of the results produced by the combinations of a few simple elements; and have reason to believe that, as our knowledge increases, this characteristic will be still more apparent. Why should not the same be true also of the animal economy? It is a complex and intricate organism, subjected to the control of a central power—the brain—from any change, in the action of which, innumerable deviations from a normal condition might, a priori, be anticipated. How much more philosophical, then, to recognize a single principle capable

of producing such change, than needlessly to multiply causes, and invoke the interposition of as many agencies as there are diseases in the nosology! We have imaginary miasms for the several exanthemata, for influenza, for cholera, for each of many different kinds of fever, for hooping cough, mumps, &c. &c. In accounting for the phlegmasiæ, it is true, we are contented to veil our ignorance and flatter our vanity under the comprehensive phrase of "taking cold;" an expression, however, to which we attach no definite ideas, and which, in its literal sense, is proved to be incorrect by circumstances of daily occurrence.

An etiology so manifold cannot be true; and if the abnormal manifestations may, in very many cases, be more satisfactorily explained through the instrumentality of a single principle, it must be abandoned.

The analogy existing between the nervous force and electricity has long been known; their actual identity has been rendered not improbable; and with this hint to guide inquiry, it is surprising that observation and reflection have not led to more important results. The arguments adduced by some physiologists to disprove this identity, and establish instead a state of "correlation," are far from being conclusive; and even if this were admitted, it would not militate against the view that I propose, which only requires that the nervous force should be affected by the mutations of the electrical fluid. Under the influence of vitality there would necessarily be some resistance to external agencies, and deductions drawn from experiments performed upon inanimate portions of a nerve, or upon the living nerve in an unnatural condition, are open to obvious objection. Light heat and electricity are now regarded as probable modifications of the same element, and there is no reason why, under another modification, that element should not constitute the vis nervosa also. A strong presumption of their substantial sameness, notwithstanding the reasoning which would invalidate it, is afforded by the existence of several species of fish with electrical organs; the action of which is dependent upon their connection with nervous centres, varies in intensity with the extent of that connection and the health of the animal, is under the control of the will, and, through a continued series of discharges, is capable

of exhausting the nervous energy in a degree sufficient, in some cases, to occasion death.

I regard the brain and nervous system as an apparatus through the medium of which, electricity—the great agent of PROVIDENCE in the production of most of the phenomena of nature—modified and restrained by certain laws, is made subservient to the purposes of life ; in other words, as a vital electrical machine through which that subtle fluid is both separated and distributed in accordance with the wants of the economy. If this hypothesis be correct we should naturally expect that, though to a great extent independent of external influences, it would yet be liable to be affected by fluctuations in the quantity of that fluid in the surrounding elements ; and that this disturbance, moreover, would be more considerable while the organ, mutable and unconfirmed in its action, was in a state of greater proportional development, as in childhood. What we should thus anticipate, has been shown to be true in fact ; electricity, when present in excess, exciting the functions and exalting vitality, while the contrary effect is produced by its deficiency. In a state of health and mature existence, when, all the functions being vigorously performed, the resisting power is greatest, the disturbing influence of such variations is comparatively slight, but under other circumstances they become a frequent and potential cause of disease. We have all experienced the feeling of energy and elasticity which is imparted when the electrical fluid is present in due proportion in the atmosphere, as in clear cold weather, and more strongly still the sensations of chilliness and discomfort occasioned by its deficiency under opposite conditions. Rheumatic persons, and those who have recently suffered from sprained or fractured limbs, can predict with unerring certainty an approaching atmospheric change, though to others there may be no sensible indications of its occurrence ; and the evening exacerbations, which we observe in fevers and other complaints, are owing to the same cause,—the system, in its disturbed or debilitated condition, being unable to bear, without suffering, electrical changes which would exert little or no perceptible effect in a healthy state. It is these changes, moreover, consequent upon the withdrawal of the sun's rays, precipitating the dew, and thereby increasing the conducting power of the air, which render exposure at this time so dan-

gerous in certain seasons, and not, as has been supposed, the greater prevalence on such occasions of miasmatic exhalations. The extreme sensibility to such impressions of the affections which are purely nervous, is a subject of common observation. Every physician must have noticed the great frequency of asthmatic attacks before a change of weather. The epileptic paroxysm occurs also most frequently in the night; and while this may perhaps be explained in part by the temporary suspension of the will in sleep, it is not irrational to attribute it in some degree to electrical changes, which are both more common and more prejudicial at that period; especially as we know that some persons, subject to this malady, are affected only at the vernal and autumnal equinoxes, when these fluctuations are greater than other times.*

The familiar expression of "taking cold," which is supposed to account so satisfactorily for many of the ailments to which flesh is heir, may be mentioned as another example of such influence. This is owing, not to variations of temperature, as generally believed, but to disturbances in the electrical condition of the atmosphere, of which these variations are effects or accompaniments. It is not unusual for individuals, especially those of tender age, to retire in apparent health to rest, in a comfortable room and bed, and to awaken after some hours with a sore throat, or a paroxysm of croup; and we have all known persons to be attacked with these and other complaints said to arise from "cold," who have been closely confined for days or weeks to apartments, the air of which has been steadily maintained at an elevated temperature. They could only have been affected therefore by changes in the electrical constitution of the air without, and these, though less likely to be injurious under such circumstances, would be felt with the instantaneousness of thought, however situated. It is worthy of remark that these effects are chiefly produced in the elemental changes which precede a storm, and less frequently during its continuance; when the rain or snow begins to fall, the electrical equilibrium is restored, and, if the vascular system has not become involved, neuralgic pains and

* Rheumatism scarcely excepted, there is not a disease in the whole catalogue, the phenomena of which are more in harmony with the electrical theory than those of epilepsy.

uncomfortable sensations subside. The knowledge of this fact has induced me, where I have the privilege of choice, to postpone important and delicate operations—those on the eye, for example—when a change of weather is impending; preferring rather to operate while the rain is actually falling, than during the dispositions preliminary thereto.

The effect on the gravid female of certain atmospherical conditions has been long observed. “Cold, rainy weather, and low damp miasmatic localities,” says Professor Gilman, “have been recognized since the days of Hippocrates, as disturbing pregnancy and causing abortion. To the influence of the atmosphere is to be attributed the frequency of abortion, miscarriage, or other mishap in pregnancy by which some years are signalized.” The probable explanation is, that the expenditure of nervous energy in the reproductive process, renders the system more liable to be affected by such changes. Insane persons, on the other hand, have always been, in a remarkable degree, insensible to atmospherical vicissitudes as well as exempt from epidemical impressions, and this exemption is owing to the habitual exaltation of cerebral action in their case. It is stated that not one inmate of the Lunatic Asylum died during the pestilence which lately desolated New Orleans.

These, and a host of similar facts, may be adduced to prove that there is nothing improbable in the hypothesis, that under circumstances of predisposing or concomitant influence, general or individual, pathological effects of far greater gravity, variety and extent, may be occasioned by the exhaustion of nervous energy through changes in the distribution of the electrical fluid; and that the exhaustion thus induced, may be the proximate cause not only of the exanthemata and most other forms of fever, congestive and otherwise, but also of cholera, influenza, hooping cough, erysipelas, the idiopathic phlegmasiæ, &c., &c.

The long continuance, in various degrees and combinations, of heat, drought, cold, and humidity, or the marked predominance of any one of these conditions, will create predispositions which determine the general character of the prevailing diseases. A hot and dry summer will be nosologically distinguished by affections of the alimentary canal, and will be followed by fevers of various type and degrees of severity; a peculiarly raw and chilly

atmosphere precedes and accompanies influenza, a disease which is often characterized by excessive disturbance of the nervous system; while a cold, wet, and variable state of weather is favorable to the production of the exanthemata, typhoid fever, erysipelas, &c. Among the circumstances alluded to as affecting individuals, and thereby giving efficiency to electrical vicissitudes, may be enumerated fatigue, fasting, loss of sleep, exposure to a chilly atmosphere, the depressing passions, and whatever tends to debilitate the frame and exhaust or diminish nervous power.

The indirect action of heat during the summer months excites the abdominal viscera into unnatural activity, and gives rise to diarrhoea, dysentery, cholera morbus, &c. Debility ensues as a consequence of its prolonged operation, and in ordinary seasons the same predisposition continuing in a mitigated form, intermittent and remittent fevers—in which the vascular change is rather congestive than inflammatory—chiefly prevail during the early autumnal months. A higher grade of heat, producing a greater degree of exhaustion, and increasing the inflammatory tendency, which expends itself principally on the stomach and bowels, is the cause of yellow fever. At a later period, the system re-acting under the invigorating influence of cold, the predisposition again changes, and, as a general rule, eruptive fevers and organic inflammations abound.

The view which I have taken of this subject does not rest wholly on hypothesis. The diminution of magnetic power during the prevalence of cholera, has been ascertained by actual experiment. Mr. Mather, of South Shields, England, states that in 1849, when cholera of a very fatal character was epidemic in his neighborhood, he found, as the result of numerous observations carefully made, that a magnet which ordinarily carried two pounds and ten ounces, would, when the atmospheric indications were nearly at their worst—the air being almost saturated with moisture—sustain only one pound and ten ounces; the degree of its attraction varying with, and being in inverse proportion to, the virulence of the disease. In the same year the number of deaths in Paris from this pestilence, rapidly increased until the eighth of June, when they amounted to six hundred and twenty-three. On the evening of that day there occurred a thunder-storm of unusual severity, and the cholera immediately began to

decrease; by the eighteenth, there was a daily report of one hundred only, and at the close of the month, the mortality had fallen to thirty. Similar observations have been recorded by others; and from a consideration of all the circumstances attending this disease, its preference for the great water courses of a country, &c., its electrical origin may be regarded as pretty certainly established. The meteorological constitution in which influenza appears, would incline us to predict with certainty a like condition of things in reference to that complaint; and all the diseases above enumerated, are notoriously most frequent—indeed they prevail almost exclusively—in seasons when electrical changes are greatest, and their injurious operation aggravated by cold, moisture, and other depressing or auxiliary influences. There are many facts, moreover, irreconcilable with the commonly received notion of the malarious production of fever; and with t absolutely denying the deleterious action on the animal economy of exhalations from decaying vegetable matter, I am fully convinced that a part far too prominent and exclusive has been attributed to their agency. The theory afforded a plausible solution of many things hard to be understood, and being supported by a multitude of apparent facts, has been too hastily received and adopted by the profession. The complaints supposed to be thus engendered, prevail at a period when electrical vicissitudes are greatest, and the body, debilitated and otherwise disordered by the protracted heat of summer, is most sensible to their impression; they are often observed where there is no reason to suspect the operation of malaria; are notoriously reproduced by other causes after they have once occurred; and are promptly cured by means which eliminate no poison, but merely restore the lost tone of the system—frequently, indeed, by mental impressions alone.

That such diversity of effect should be produced by the same morbid agent constitutes, as has been seen, no valid objection to the hypothesis which we advocate. Man in his ignorance is fond of multiplying causes, but science is daily demonstrating the simplicity of truth. In the present instance there is no necessity for a multifarious machinery. Defective innervation may give rise to aberrations as various as there are tissues and organs to be acted upon. Thus, in the dermoid tissue we may have de-

rangement of the *capillary circulation*, of the *exhalants*, or of the *secretory apparatus*, constituting respectively, scarlatina, rubella and small pox; or we may have cholera from the same cause directed to the mucous membrane of the stomach and bowels; or any one of the phlegmasiæ, according as the development of latent imperfection, or accidental causes may determine. To those, therefore, who consider the complicated organism of the human frame, it will not appear strange that results apparently so different, and yet in reality essentially the same, should be produced through the instrumentality of a single principle directed in its morbid manifestations by predispositions arising from a variety of circumstances, existing in countless combinations, and involving whole communities, or affecting individuals only.

Its *modus operandi* may be briefly explained, and will perhaps be best understood by a reference to scarlet fever. This disease, though occasionally observed in every season of the year, prevails most extensively from October to April or May, a period during which electrical fluctuations are greatest, and their influence promoted by the various circumstances already mentioned; and, as might be expected, is chiefly confined to children, whose power of resisting hurtful impressions is less than that of persons of mature age and vigor. The functions of the brain being depressed or otherwise disturbed by the rapid abstraction of sensorial energy, the control of that organ over the capillaries is lessened, they consequently become dilated, the circulation through them is retarded, and a condition is induced closely bordering on inflammation. This, though general in all the tissues, is more particularly observed in the mucous membrane of the digestive system and in the skin, as evinced in the former, by the redness of the throat and the projecting papillæ of the tongue, and in the latter, by the scarlet efflorescence and other symptoms of increased action; the predominance of which in this tissue generally indicates a tractable form of the complaint. Meanwhile, the brain reacting against the morbid agency separates and transmits the nervous energy as before; but there is now a demand for a greater supply, in order to secure the restoration of the impaired tonicity of the capillaries. This is accomplished through the exaltation of its functions produced by the febrile

movement—an action of salutary tendency when it does not transcend the required limits—and after a commotion of greater or less severity, occupying necessarily a nearly definite period, the system reverts to a state of convalescence. Such is the order of things in scarlatina simplex. In the anginose variety the pathological alterations proceed one step further. The circulation through a portion of the capillaries is not only retarded but actually arrested, accumulation follows, and inflammation is set up in the fauces, where, from the laxity of the parts and the exposed condition of the vessels, we should naturally expect to find it. In still more aggravated grades of the malady, whether owing to the intensity of the cause, feebleness of constitution, or some other circumstances affecting the individual, the powers of life are prostrated, in many instances beyond the capability of reaction; the brain being deprived of its nervous energy coma sometimes ensues, innervation is suspended, congestion takes place in the larger organs, and after a struggle of varying duration death generally closes the scene—often supervening in very few hours.

The production of small pox and measles, when prevailing epidemically, or in sporadic cases where there has been no exposure to contagion, may be explained in like manner. The difference being, that in scarlatina the morbid influence exerts its force chiefly on the *capillary circulation*; whereas, in variola and measles, while it implicates—more particularly in the latter—the pulmonary, rather than the gastric, mucous tissue, it receives from some predisposing causes, a determination to different departments of the *secretory* apparatus of the skin, and from the elaboration which there takes place derives its specific and contagious character. In small pox it is not improbably the sebaceous follicles, and in rubeola the exhalants, which are thus affected.

The application of the same mode of reasoning to the phlegmasiæ is sufficiently obvious. An individual, from exposure in a raw and damp condition of the atmosphere—the physical powers being perhaps depressed by fasting, fatigue, or some other predisposing cause—becomes unwell, and is said in common parlance to have “taken cold.” More correctly speaking, the sensorial energy has been abstracted from the system more rapidly than

it could be generated without disturbance of the cerebral functions; the effect is felt in the diminished innervation of some organ liable, from congenital or acquired predisposition, to fall into diseased action; and as a consequence, inflammation takes place either in its parenchyma or investing membrane, as circumstances may determine.

The exanthemata prevail chiefly in early life, when the nervous system is not only predominant and impressible, but there is, moreover, from their greater functional activity, a natural tendency to affections of the dermoid and mucous tissues; in after years the predisposition inclines rather to disease of the contents of the great cavities. The exemption from a second attack, though by no means so general as is commonly supposed—especially in measles and scarlet fever—increases with the lapse of time, and, as might be expected, when they do recur, they are characterized by diminished severity; assuming, for the most part, the milder forms of scarlatina simplex, or rubeola sine catarrho. Various complaints originate in the same predisposition; and during the prevalence of these and other epidemics, there will be, of course, an increase of congeneric diseases. When the meteorological conditions favorable to the production of small pox exist, vaccination will confer little or no immunity.

I am far from supposing that fluctuations in the quantity of the element which I have mentioned, is the sole cause of morbid action. Disease once induced, has, in many instances, the power of self-propagation, and often originates, moreover, from other causes operating as well within as without the individual; but when it prevails epidemically, or in sporadic cases of complaints sometimes epidemic, where there has been no exposure to contagion, and on all occasions where it is said to arise from "cold," its etiology I believe to be as I have described.

Contagion itself, however, it may be remarked, acts very much in the same manner; not indeed by abstracting electricity from the brain, but by directly depressing the power of that organ, and thereby preventing it from emitting the due amount of nervous energy. The same series of consequences follow in the one case as in the other; thus, between typhus and typhoid fever the chief difference is in their causation, the train of morbid action being alike in both

When the predisposition is wanting, contagion will be nearly or altogether inoperative. Small pox itself under such circumstances will not spread beyond the individual affected; and may even give rise to affections of a different kind. I have seen cases of fatal congestive fever manifestly caused by attendance on the confluent variety of that disease.

The doctrine is fruitful in its practical applications, and involves whatever may protect the system against the fluctuations of this potent and all-pervading principle. It supplies us with an intelligible reason why in the selection of a residence we should reject localities the air of which is habitually charged with moisture and its conducting power thereby increased, whether from the vicinity of water or the character of the soil.* It would incline us, for a similar reason, to avoid exposure in feeble states of health to the early morning and evening air of the country, when intermittent and remittent fevers are rife, as in the fall; and when such exposure is unavoidable, points out the propriety of sustaining the vital powers by a previous meal and the exhibition of some tonic medicine. It explains how it happens that in certain seasons, and during the prevalence of certain winds, situations ordinarily salubrious become unhealthy.† It teaches us, moreover, during the existence of any epidemic to abstain from everything which may depress or exhaust the nervous energy, and to maintain the action of the brain in its accustomed, or even in increased vigor, as well by the stimulus of hope and confidence, as by the use of means which exert their influence more especially upon that organ; affording thus a probable rationale of the operation of belladonna and other prophylactics. It guides us, furthermore, to a right practice in many affections now empirically treated, and indicates the true *methodus medendi* in any new phase which disease, originating as we have supposed, may hereafter assume; we should, for example, refrain from venesection, and as much as possible from other debilitating

* Humidity alone, when *universal* and constant, tends to preserve the electrical equilibrium; hence the salubrity of sea-air, and hence also the comparative healthfulness of a rainy autumn, so far at least as regards complaints of supposed miasmatic origin.

† The western side of rivers, that of the Schuylkill and Delaware, for instance, is more healthful than its opposite.

measures, in scarlet, typhoid, and other fevers; and in acute rheumatism, which involving in its commencement the nervous fibre itself is rapidly followed by the exhaustion of its excitability, we should endeavor to allay pain by anodynes, control vascular excitement by antimony, and early resort to means adapted to restore the impaired sensorial power. A want of due innervation being a primary deviation in the train of morbid action, it holds out a reasonable hope of subverting certain complaints in their incipient stage, by the employment of tonics, as quinine in large doses, before the vascular system has become actively implicated, and forbids a resort to the lancet at least until such implication has taken place, and reaction, permanently secured, threatens by its excess to endanger some important organ; this is a practice pursued in some parts of our country in pneumonia typhoides, it has been successfully adopted in influenza also, and reasoning from analogy should, with other appropriate remedies, be equally effective in the treatment of cholera.* It instructs us in some cases of chronic inflammation to restore and sustain the tone of the extreme vessels even while we endeavor to relieve local congestion by depletion—general invigoration and the topical abstraction of blood being not always incompatible. It abates in many instances the dread of contagion, and relieves us from the supposed necessity of purifying the blood by the elimination of an imaginary materies morbi; while by inculcating a sounder pathology it discountenances the common fallacy of inferring from the composition of perverted secretions, the remedies adapted to any particular complaint. It suggests the necessity of adequate clothing of appropriate quality—that is, of non-conducting material—and other precautionary measures in the management of children. And finally admonishes us of the importance at all times of preserving the vital forces in their best possible condition, and thereby of affording to the vis medicatrix naturæ full opportunity of accomplishing its recuperative tendencies.

It might, perhaps, be supposed on first impression, that disorders originating in a temporary abstraction of electricity, ought

* In children the exanthemata are frequently ushered in by convulsions or coma, and I have known the same thing to happen also in intermittent and other fevers; showing the primary action of the morbid cause upon the brain.

to be cured by the artificial supply of that fluid ; and this supposition would not be unreasonable if our bodies instead of being living systems were inanimate machines. In the actual constitution of things, however, other morbid actions speedily follow the temporary relaxation of cerebral control ; various complications ensue ; and effects are produced which can only be obviated or repaired in accordance with the laws which govern the animal economy alike in health and disease.

In what has been said, the substantial identity of the electrical fluid and the vis nervosa has been assumed ; but, as before remarked, this is not necessary for the truth of the theory which I have advanced. It is sufficient that there should be such a reciprocal relation between them that fluctuations in the one will produce a corresponding change in the other—the morbid alterations being accounted for with equal clearness on either supposition,—and thus much, I presume, will be conceded by all physiologists.

The theme is a prolific one, and the general ideas thus briefly expressed, far from exhausting the subject, are intended merely as suggestive. They are not wholly original, for the electrical origin of several diseases has long been suspected, and as respects one of them, well nigh established ; but I am not aware that the hypothesis has ever received so extended an application. To my mind it harmonizes and explains many discordant and otherwise inexplicable phenomena, inculcates a rational and conservative practice ; and while by its adoption we substitute a simple, intelligible, and effective etiology, for one complex, contradictory, and inadequate, we get rid of much of the fanciful theory and unfounded reasoning which have so long bewildered and disgraced our profession.

Philadelphia, June, 1854.

On a new method of preserving Anatomical and Pathological Specimens. By JOHN H. BRINTON, M. D.

The preservation of the animal tissues, in such manner as to present unchanged, their normal and abnormal relations, has ever been an object of study and interest to the practical Anatomist, the Pathologist and the Surgeon. But as yet, all attempts to retain, in an unaltered state, the size, shape and color of parts, have to a certain degree been unsuccessful.

Anatomical objects have hitherto been preserved in one of two states, either wet or dried. Both of these methods are, however, inadequate; for if fresh animal tissues be immersed in alcohol, or any other antiseptic fluid, they become blanched in color, condensed in structure, and consequently modified in size and shape. At the same time, they present inconveniences for demonstration. The method of preparation by drying is open to even more serious objections, since the parts are so shrivelled and displaced as to convey but an imperfect idea of their primitive relations.

Now, since this shrinking of the tissues and their decomposition, depend most probably upon atmospheric influence, it recently occurred to me, that should I be able so to exclude the air, as to cause all evaporation to cease, I would effectually prevent, not only the desiccation of the part, but also its decomposition. Acting upon this idea, I commenced a series of investigations; the success attendant upon which, up to the present time, has led me to submit the results to the profession.

My object being to encase hermetically every portion of the specimens, I selected for my earlier experiments a solution of gun cotton in ether, the ordinary collodion. By means of a brush, I applied this carefully upon every portion of the external surface of the object to be preserved. The ether quickly evaporating, a thin pellicle of the cotton was left, coating the entire preparation. This process was then repeated, and the preparation finished by the application of successive layers of damarra, copal and shellac varnishes.

But it early became evident to me, that collodion was entirely unfitted for the preservation of the generality of specimens,

especially for those of any size and bulk. It possesses too slight a degree of tenacity, and is liable to become fissured, and to chip off; at the same time its tendency to form white opaque layers, when moisture is present, renders it unsuitable as a transparent coating. I was, therefore, obliged to make use of some other protective material, and for this purpose I selected gutta percha. This I dissolved in benzole, adding at the same time to the solution a few grains of caoutchouc in order to increase the elasticity of the pellicle. By filtering the viscid dark-colored result through animal charcoal a perfectly colorless solution may be obtained, which upon application deposits a tenacious film.

This film, unlike that left by the evaporation of the ethereal portion of the collodion, evinces but little tendency to opacity; and, indeed, for all practical purposes, may be said to be perfectly transparent. The tenacity of the thinnest pellicle is very great; it possess sufficient elasticity, is not liable to crack, and thus far has proven amply sufficient to prevent the occurrence of evaporation, shrinking and decomposition. At the same time, by repeated applications of the solution, the coating of gutta percha can be increased to any desirable thickness.

To prepare a muscular specimen, as, for example, one exhibiting the relations of the arm and forearm, a limb should be selected which has been previously injected with the chloride of zinc, arsenic or other antiseptic solution. When the parts have been sufficiently exposed by dissection, the whole limb should be coated with the colorless solution of gutta percha: a transparent pellicle will then be left by the evaporation of the benzole. This process should be repeated until a layer of considerable thickness is obtained. Upon the muscular mass, the gutta percha may be applied in much greater quantity. Should opacity here result it matters little, as in consequence of the blanching of the muscle, dependent upon the previous antiseptic injection, an artificial coloring process will be necessitated. In preparations, however, of perfectly fresh muscles, or of those which have been injected with Horner's solution, this will not be the case. The layers of gutta percha having been obtained of sufficient thickness, it will be found desirable to apply next a coating of collodion, which has been filtered, and then mixed with Venice turpentine. This preparation possesses no contractile powers whatever, but is of

great body and consistency. It splints, as it were, the specimen securely, and ensures stability and firmness.

In order to impart a proper hue to those muscles, whose color may have been affected by the preceding processes, I make use of collodion stained with the wood of the *Pterocarpus santalinus*, (the ordinary red saunders.) The resulting color, when varnished, simulates closely that of fresh muscles. The specimen should then be completed by the application of damarra and copal varnishes. The adipose tissues, the tendons, fasciæ, nervous and cutaneous surfaces will present almost the appearance of a recent dissection; the muscle alone will possess an artificial color, and even this can be avoided.

Each specimen should be mounted on a board separately, and I have found the most convenient method for so doing, to consist in the preparation first of its dorsal surface. The object should then be placed upon the board; when the anterior surface, that intended for inspection and exhibition, can be finished in situ. I have also found it advisable to keep them covered by glass cases. The period required for the preparation and mounting of an object by the above process does not exceed five days.

I have now in my possession specimens of meat which have been preserved by the preceding method sixty days, without having been previously saturated by any antiseptic fluid. In one preparation which I examined, after removing the gutta percha coat at the expiration of forty-five days from its completion, no decomposition whatever had taken place. The fibres of the muscle were, however, somewhat blanched, and afforded a slight odor of the benzole used in the preparation. Exposed to the air, decomposition ensued at the expiration of four or five days.

I have prepared, in a similar manner, a number of specimens, not only of muscular, but also of nervous tissues, as the brain and spinal marrow. In these no shrinking has occurred, and no evidence of decomposition exists. On the contrary, the preparations now present a harder, firmer and more natural appearance, than at the date of their completion. In the nervous preparations the natural color is retained, and is visible through the transparent coatings. I am at present engaged in making application of the process to the preservation of patholo-

gical tissues, and with every prospect of success. I believe also that botanical specimens may be preserved in a similar manner, and, indeed, it seems to me not impossible, that, at some future day, an extension of this method may be rendered subservient to the preservation of meats, and all fresh animal tissues.

A longer period than has as yet elapsed, is required, of course, to test fully the value of the above proceeding; at the same time the results already obtained seem to me so satisfactory, as to warrant me in laying them before the profession.

BIBLIOGRAPHICAL NOTICES.

On Rheumatism, Rheumatic Gout, and Sciatica; their Pathology, Symptoms and Treatment. By HENRY WILLIAM FULLER, M. D., Cantab. (Reprint.) N. York, S. S. & W. Wood; 8vo., pp. 322.

This work recommends itself even to the superficial reader, by its scholarly tone and its comprehensive scope, but its thoroughness and precision render it equally acceptable to the scientific enquirer and the practitioner of medicine. That it is chargeable with certain defects of arrangement, omissions of fact and errors of reasoning we believe, yet we are also of opinion that it contains a completer description of rheumatism in its manifold phases and relations than is to be met with in any other treatise upon the subject. The narrow limits of this notice preclude the possibility of examining the work in detail; a consideration, therefore, of some of its more striking features is all that will be attempted.

The first and second chapters treat of the causes of rheumatism; the third of its seat and varieties; the fourth and fifth of the acute form and its treatment; the sixth, seventh and eighth of rheumatic affections of the heart and their treatment; the ninth of the statistics bearing upon the last named subjects; the tenth of rheumatic cerebral and pulmonary affections, and disorganization of the joints; the eleventh of rheumatic gout; the

twelfth of chronic rheumatism; and the thirteenth of sciatica and other forms of neuralgic rheumatism. This arrangement, it is evident, is very comprehensive, the author has rendered it also very full. The subdivisions of the chapters are not always equally logical, and were it not for an analytical table of contents, the labor of referring to particular subjects would be likely to deter many who might, nevertheless, find the result a profitable one. In all works intended for study and reference there should be running titles, marginal analyses, headings to paragraphs, &c. If these helps were thought essential in days when volumes were few in number and apt to be thoroughly studied, they are still more so now when the multiplication of books is infinite, and so many aspire to a permanent place in our professional literature.

In the Preface we are assured that the work has been composed with a constant reference to facts, and, upon the whole, there is good evidence that it has been so. In the first chapter, however, there is a notable example of the contrary. Cold, as every one knows, has been in all ages regarded as the chief cause of rheumatism, but, says our author, "though the ascertained local and general effects of cold differ altogether from the symptoms of rheumatism, yet some, even among the profession, have been found to adopt this prevalent notion, without an attempt to show that cold either does or can produce the effects assigned to it." He then proceeds to illustrate the effects of cold by describing the primary action of it upon the skin, &c., and its secondary consequences, frost-bite, gangrene, &c. Now, as every body knows who has seen or suffered lumbago, stiff-neck, or pain and stiffness of a joint from a draught of air—and who has not?—cold produces other effects besides those just mentioned, produces in fact rheumatism. That the abstraction of heat is *all* that intervenes between the action of the cause and the symptoms of the disease, as seems to be more nearly the case in frost-bite, no one will maintain, and no one did ever assert; but because that intermediate link in the chain of effects is unknown, we must, as in all similar cases, assume the remoter for the proximate cause, and still continue to say that the chief and probably the only external cause of rheumatism is cold. Dr. Fuller, indeed, after denying the agency of cold in the passage above quoted, as well

as in others, and laboring to show how very different the effects of cold are from the phenomena of rheumatism, admits (p. 37) that cold and other external agencies are predisposing and exciting causes of the disease. But not content with this conclusion, which is *urbi et orbi recepta*, he contends for the real existence of a proximate cause, and, like various other writers, finds it in "the presence of a morbid matter in the blood, generated in the system as the product of a peculiar form of mal-assimilation—of vicious metamorphic action. This poison it is which excites the fever and produces all the pains and local inflammations," &c. (ibid.) Of the nature of the supposed poison he says, (p. 31,) "It is probable, therefore, as the skin is the peculiar emunctory of lactic acid, that in it we have discovered the actual materies morbi." This hypothesis was first proposed, we believe, by the ingenious Dr. Prout, but although many years have elapsed since then, it still remains in the chrysalis state of a hypothetical postulate, and even the assistance of our author has not enabled it to stand self-poised. Until its completer development takes place we may be satisfied in assigning cold as the chief cause of rheumatism, while we describe the retention in the blood of the normal excretion from the skin as one of the ordinary phenomena of the disease.

Having thus endeavored to state the relations to one another of the causes upon which rheumatism depends, several subordinate sources of the disease may be alluded to; those mentioned by the author are indigestion, defective or perverted uterine action, ill performance of the renal functions, excessive venery and debauchery, prolonged lactation, and an inherited rheumatic taint. In all of these, except the last, there is the common element of debility, proneness to suffer from changes of temperature, susceptibility to cold. Cold, after all, then, would seem to be the unique cause of the accidental disease. Not that the temperature of the air need be very low—for the feeble and susceptible are chilled, and experience all the phenomena of coldness, when the robust and healthy are oppressed with heat—but only that it be such as to produce the sensation of cold, with arrest of the perspiration, &c.

According to Dr. Fuller, "rheumatism, like gout, is distinctly hereditary." The grounds of this statement are the results of

investigations among *hospital patients*. As well might one say that poverty is hereditary. Upon the data furnished by the same class of patients, the latter proposition would undoubtedly be found every whit as true as the former. Gout, it is well known, attacks the children, the grandchildren even, of those whose debauchery has occasioned the disease in themselves, although their descendants have led entirely temperate lives. There is no evidence that the same can be said of rheumatism. The poor, and all whose occupations expose them habitually to vicissitudes of weather, are the chief subjects of rheumatism. Their children, leading the same sort of life, ill clad, ill fed, ill lodged, laboring in tempest and calm, in winter and summer, robbed of their natural rest, and perhaps exhausted by dissipation, may reckon causes enough of rheumatism in these hardships, without having to reproach their parents with an additional inheritance of suffering.

The author says (p. 49) "that no one texture is exclusively the seat of irritation in rheumatism," . . . "for, if rheumatic inflammation be due to the presence of an irritating matter in the blood, it is obvious that *all* must be more or less liable to suffer." He then goes on to show that "the textures most commonly implicated in rheumatism are all examples of the albuminous and gelatinous tissues," the fibrous tissues, as they are commonly called. In other words, his second proposition contradicts his first. Still, we would only take exception to his inference that *all* parts are more or less liable to suffer. On the contrary, if the symptoms of rheumatism be due to lactic acid or other material substance in the blood, it would be most apt to accumulate in the white tissues where the blood vessels are smallest; and these are precisely the tissues most affected. The explanation is more consistent than the author's; but both are merely speculative. It is of more consequence and interest to know that the joints most exercised are those which are most apt to be attacked, and that corresponding joints on opposite sides of the body are most frequently the seats of the disease, the latter fact showing the diffusion of the material cause of the disease through the system, and the former pointing to the mode in which the occasional cause—cold—acts by arresting perspiration where it is most profuse, and where the exhaustion of labor ren-

ders the part least able to resist and overcome the morbid impression.

The symptomatology of acute rheumatism, described in Chapter IV., is very minute, complete and clear, and is probably as near the truth as any general description can be. The author regards as erroneous the opinion that the profuse perspiration of the disease is enfeebling and wasting, and neither alleviates the patients' sufferings nor shortens their duration. He grounds his belief upon the fact that if they are checked for a time the symptoms grow worse, and he states that the more profuse and acid the sweats are, the shorter is the duration of the attack, *provided* they do not occur in debilitated and cachectic states of the constitution. With this proviso his opinion is perhaps correct. Certain it is, that those who are much weakened by the sweats are not benefitted by them, nor do they emit the characteristic acid smell of such as tend to the resolution of the disease.

As regards the treatment of acute rheumatism, the author condemns, unequivocally and very properly, the copious and repeated blood-letting practiced by certain modern Sangrados. He believes that it retards convalescence and favors relapse, and therefore does not recommend depletion as a part of ordinary practice, but as suitable only for robust and plethoric individuals in whom the febrile reaction runs high. Active purging he condemns no less strongly, and prescribes aperients only when palpable derangement of the chylopoietic viscera or decided constipation indicate their propriety. Of opium he speaks in terms of merited approbation, and confirms the assertion of all who have used this medicine freely, that very large doses of it are not only borne without inconvenience, but that they promote, in a remarkable degree, the patient's comfort, while they often hasten the period of convalescence, and lessen the frequency of inflammation of the heart. He recommends from six to twelve grains to be given in the twenty-four hours, but we think that where many joints are attacked, when the pain is severe and the patient irritable, much larger doses even than these may be prescribed with advantage. Sweating by hot vapor, &c., the author condemns; but if his hypothesis of the nature of the disease were true, this remedy ought to be the sheet-anchor of his mode of treatment. For-

tunately, he dismounts from his hobby when experience arrests its motions. Mercurials with opium, so as to produce salivation, find no favor in his eyes as a remedy for acute rheumatism, and tartar emetic quite as little; as to bark, he shows that it probably disposes to serious complications in the shape of cerebral derangement, and of colchicum given alone he can find nothing favorable to say, except when it excites profuse evacuations from the kidneys, the stomach, or the liver and bowels. Guaiacum he has found serviceable in those cases only which are unaccompanied with perspiration. Nitrate of potash, in spite of the eulogies of Drs. Gendrin, Bennet and others, has not been successful in his hands. Lemon juice he cannot recommend generally. But of the alkalies and their salts he thinks it impossible to speak too highly, although, administered alone, they are quite inadequate to effect a cure. Dr. Fuller employs them in conjunction with all or several of the remedies before mentioned. He says:

“In large but ordinary doses they generally mitigated the severity of symptoms, yet failed in affording more than partial relief, but when they were exhibited in sufficient quantities, and in combination with other remedies, the most agonizing pain was speedily removed, and the fever subdued with marvellous rapidity. I have, therefore, ever since, administered them largely, and have pushed them until my object has been attained. Nor have I seen reason, on any one occasion, to hesitate in following out this plan of treatment. It has now been pursued in a large number of cases, and in almost every instance has produced the most astonishingly favorable results. The patients have speedily lost their pains and have proceeded rapidly to convalescence. In twenty-three out of thirty-nine cases in my note-book, the pulse was tranquillized within forty-eight hours from the commencement of treatment. and in twenty-eight the pain was lulled, and the local inflammation greatly subdued within the same time, whilst in the remaining cases a longer time was required, in consequence either of previous constipation, or of the co-existence of some internal complication.

“The form in which I usually administer the remedies, is that of a simple saline or nitre draught, to which, if the patient be a person of average strength and robustness, bathed in profuse perspiration, with red, swollen, and exquisitely painful joints, a furred tongue, loaded urine, and a full and bounding pulse, I usually add from two to three drachms of the potassio tartrate of soda, ten or fifteen minims of the vinum colchici, from fifteen to twenty minims of the vinum antimonii, and from ten to fifteen minims of the tinctura opii, or of Battley's sedative solution, to prevent the salt running off by the bowels. This draught is repeated, for the first twelve or twenty-four hours, at intervals of three or four hours, according to the strength of the patient and

the severity of the attack ; and if the pain is excessive, I prescribe a pill containing from half a grain to a grain or a grain and a half of opium, or an equivalent dose of Dover's powder to be taken once or twice a day, taking care to increase or diminish the quantity of the sedative, according to the circumstances of the case ; on the one hand avoiding constipation and narcotism, and on the other, guarding against diarrhœa."

Amongst external remedies leeches, blisters, and warm fomentations are recommended. Of the last he prefers alkaline solutions, but, very naturally we should think, found them most successful when mixed with opiates.

In the chapter on rheumatic affections of the heart the author states in opposition to Drs. Latham and Watson, that this complication is most apt to occur when the rheumatic fever is severe. He also found that the subjects of it were weak and pale, reduced by previous illness, or exhausted by the treatment adopted, and wisely learns from this fact a caution against the use of debilitating remedies. He also refutes the prevalent error that the vegetations, &c., sometimes found in the heart afford evidence of endocardial inflammation. The sounds to which they give rise during life are not accompanied by inflammatory symptoms, and true inflammation of the lining membrane of the heart is often seen without such lesions. He regards them as the result of a mechanical action of the valves and their cords, upon the highly fibrinous blood which circulates through the heart. He also thinks that the deposit is sometimes the cause rather than the consequences of valvular inflammation.

The pathological effects of rheumatic inflammation of the heart are very minutely and correctly described, with the general lesions and the physical signs, although the last are stated according to the nomenclature of a theory which takes no account whatever of the auricles as active agents in producing the normal movements and the abnormal sounds of the heart, and there is, therefore, the usual amount of confusion in explaining, according to this theory, the want of correspondence between the præcordial and the arterial pulse.

In the chapter upon the treatment of rheumatic inflammation of the heart the author attacks a prevalent error. It is often said that the use of mercurials in rheumatism tends to ward off cardiac inflammation ; the author affirms that they invite this

complication, and we fully subscribe to his statement. All that debilitates has the same effect. Nevertheless calomel is the sheet-anchor in the treatment of the attack when once developed; it perfects the impression made by local depletion, which probably has but little influence beyond relieving the pain, or by general bleeding in the few cases in which a high degree of arterial action renders this remedy appropriate. The mercurial must be pushed to the extent of producing ptyalism. When this effect takes place, the local and the general symptoms begin at once to amend. For cachectic and debilitated persons, however, mercury is not appropriate. For these, and indeed for the subjects of the disease generally, opium is an indispensable medicine. But the doses must be large enough to procure quietude and relief from pain. Blisters over the heart are also most valuable remedies when once effusion has taken place.

The proportion of cases in which the heart becomes implicated in the course of acute rheumatism is stated by Dr. Fuller at one half, and although he thinks the number might be greatly reduced by appropriate treatment, yet it would not appear that this influence is one of great weight. For the proportion of cases arising under the phlebotomizing *régime* of M. Bouillaud was 1 in 1.75, and that in the author's own practice 1 in 2.06.

The character of the cerebral symptoms which sometimes complicate this disease is thus delineated:—

“A patient, for instance, who for a week or ten days has been suffering from acute rheumatism, and has presented no untoward symptom, after passing one or two restless nights becomes strange and flighty in his manner, complains, perhaps, of headache, and is shortly seized with furious delirium, during which he appears to be insensible to pain, and moves his limbs in utter disregard of his inflamed and exquisitely painful joints. And then, if he does not shortly improve, he either dies of exhaustion or falls into a state of profound coma, and expires in the course of a few hours.”

The most interesting feature of this complication is that the delirium and fatal coma are nearly always quite independent of inflammation of the brain. The author, like Dr. Todd and others, refers them to “the poisoned condition of the blood,” but he finds it difficult to explain why they should then occur so seldom. He reverts to the fact that they are generally displayed by feeble, cachectic, susceptible persons, and although he tries,

by an analogy drawn from delirium tremens to sustain his view, it seems, after all, to have no other substantiality than belongs to a plausible hypothesis. The treatment found successful is precisely that used in delirium tremens and in traumatic delirium, viz: stimulants and opiates. Cases do sometimes, but very rarely, occur in which true meningitis arises to complicate articular rheumatism, and some also of tetanic spasms, which imply derangement of the spinal marrow.

Inflammation of the lungs and their membranous coverings is another complication which adds greatly to the danger attendant upon rheumatism. This affection has been very well described by our countryman, Dr. T. Buckler, of Baltimore, more minutely indeed than by the author of the work before us, who, however, makes the same general statements regarding the obstinacy of the disease and the efficacy of alkalies in its treatment. This chapter deserves the especial study of the reader, who will probably derive from it new views in regard to the character of certain cases of bronchitis or pneumonia which may have surprised him by their duration, and by the violence of particular symptoms.

Disorganization of the joints is another consequence of articular rheumatism, which has sometimes been called in question, and is certainly of rare occurrence. Some cases recover with permanent stiffness of the affected joint, others terminate fatally, and dissection reveal fibrinous exudation, vascular injection, or purulent deposits within the articulation. The author is of opinion that these disastrous consequences may generally be prevented by warm alkaline fomentations to the affected parts conjoined with perfect rest.

The chapter on rheumatic gout calls for no especial notice, and that on chronic rheumatism contains little that is novel or peculiar. We observe that the author attaches much importance to the use of guaiacum either in the form of tincture or associated with sulphur or cream of tartar. As a remedy for muscular rheumatism hydrochlorate of ammonia he thinks produces "marvellously good results," in fifteen or twenty grain doses, and in combination with bark. Mercurialization he regards as needless, if not hurtful, in ordinary cases, but as sometimes useful when there is excessive tenderness with puffiness about a periosteal

swelling, &c., particularly when the constitution is tainted with syphilis. A very gentle course of mercury we should, on the contrary, regard as more likely than any other single remedy to put an end to chronic rheumatism. The concluding chapter is on sciatica and other forms of neuralgic rheumatism. The author appears to take for granted that the pain of the former disease is induced, in many cases at least, by the existence of a fluid within the sheath of the nerve. He does not adduce any proofs of its existence, but seems rather to borrow the idea from Cotugno, whose treatise he refers to as the origin of the revulsive plan of treatment. He does not appear to be aware of the development given to this method within a few years, particularly by M. Valleix, who found the counter-irritant and not the revulsive action of blisters to be the efficient agent in the cure of sciatica, as well as of other forms of neuralgia.

Clinical Lectures on Pulmonary Consumption. By THEOPHILUS THOMPSON, M. D., F. R. S., Fellow of the Royal College of Physicians, Physician to the Hospital for Consumption and Diseases of the Chest; Author of *Annals of Influenza*, prepared for the Sydenham Society, &c., &c. Philadelphia. Lindsay & Blakiston, 1854.

A few months have only elapsed since we had occasion to examine Dr. Bennett's able treatise on Tuberculosis. We have now before us another work devoted to the same affection, in which the pathology of the disease, the principal subject of Dr. B.'s work, is barely noticed. In its place, however, we have presented to us what appeared to the author to be most important to practitioners in the way of direct and practical utility. Consumption is so frequent and so fearful a disease, that numerous as are the writers upon it, we always hail with satisfaction any contributions which promise to throw new light upon either its causes, symptoms, or treatment. Dr. Thompson's position as Physician to the Brompton Hospital for Consumption, affording him rare opportunities for observing and treating the disease in all its different varieties, stages, and connexions, induces us to place much confidence in his opinions. We shall proceed, therefore, to give a short summary of his book, assuring our readers that it will gratify and amply repay a full perusal.

The work consists of thirteen lectures, preceded by a short introduction designed to render auscultation more simple and comprehensible to the student. In the first lecture, the value of the indication, afforded by inspection of the chest, is well shown by the relation of several cases, one of which is the curious instance of hydatids of the liver, which, by absorption and ulceration, found their way into the lungs and were expectorated, provoking cough and causing discharge of purulent matter, night sweats, emaciation and other symptoms of phthisis. The expansion of both sides of the chest being however equal during inspiration and quite free, also, in the sub-clavicular regions, evinced that no serious disease, existed in this instance. The subject of hæmoptysis is taken up in the second lecture. Dr. Thompson asks whether the popular opinion that "breaking a blood-vessel" produces consumption, or the medical one, often implied, if not stated, that hæmoptysis precedes phthisis, is a correct one. As an answer to his query, he gives a table of twenty-four cases, in whom this symptom had occurred. In fourteen of these, other symptoms preceded the bleeding from the lungs; in six, one or other of the symptoms and the spitting of blood commenced at the same time. In four only did there exist no evidence of previously disturbed function. He says:

"You will observe that some of the cases of phthisis recorded in the table, accompanied with copious hæmoptysis, were remarkably slow in their progress. In six of the cases the quantity of blood expectorated at once has exceeded a pint, and the time which has elapsed since the occurrence of the profuse hæmoptysis to the present period has been, in these patients, respectively six months, twenty-two months, twelve months, ten months, eight months, and five years. In several of these instances, evidence of pulmonary disease preceded by many months the occurrence of hæmoptysis, and in some the disease has not yet advanced beyond the first stage. These facts are in harmony with my general experience, as showing that this symptom tends more to retard than to accelerate a fatal issue.

"The practical bearing of these facts is obvious and important, as impressing the conclusion that undue haste to arrest hæmoptysis should be deprecated, and that, as a general rule, it is better to moderate this symptom by producing determination to other organs, than to employ direct astringents. You will find great benefit in many cases from the administration of a dose of calomel or mercurial pill, with henbane, followed by the use of half-drachm doses of sulphate of magnesia with diluted sulphuric acid, administered twice a day."

To arrest hæmoptysis, in urgent cases, the most powerful of

direct astringents is acetate of lead. Turpentine is stated to be one of the most certain remedies in a majority of instances.

The third lecture upon expectoration as a means of diagnosis is highly interesting. The characteristic appearance attending the series of changes of the expectoration in the different stages of the disease are described under four divisions: 1st, the salivary or frothy indicating irritation, the result of congestion or of slight tubercular deposit; 2d, the mucous, showing a more confirmed affection of the bronchial tubes; 3d, the flocculent, characteristic of secretion from a vomica, modified by the absorption of its thinner constituents; and 4th, the purulent or porraceous, indicative of phthisis far advanced, and (if unmixed with froth) usually involving both lungs. The 4th lecture is upon the pulse; its acceleration in phthisis, and the effect of posture upon its rate in health, contrasted with the effect in disease, are discussed at great length. Regarding this latter circumstance, his investigations agree with those of Dr. Guy, who has shown conclusively that if the pulse of a healthy person be felt first as he rests with the back supported in an easy chair, and then in the standing posture, a marked difference in frequency is observable, the difference increasing in proportion to the natural frequency of the individual's pulse. The healthy difference is shown in the following table of the rate of increase.

Pulse of healthy adult, when sitting,	60	80	100	120
Ditto, when standing,	66	93	119	147
Rate of increase,	6	13	19	27

In another table, recording the pulse of the patients in the hospital, it is shown that the difference produced by change from the sitting to the standing position, is, in phthisis, very trifling, especially in the evening.

The fifth lecture takes up the consideration of the remedial effects of cod liver oil. Dr. Thompson states that the records of the hospital afford "an opportunity of comparing the effect of treatment conducted on general principles, irrespective of the use of this remedy, with treatment in which its administration has occupied an important place; and the more carefully you institute the comparison, the more you will be convinced of the value of this medicine in the treatment of phthisis, when appropriately administered, and combined with the use of such other

measures as any special circumstances in the individual patient may require."

Several interesting cases are related, showing its efficacy. The following case is, in every respect, so encouraging, that we have concluded to transcribe it.

"M. B., is, I am informed, the only remaining member of a large family, all of whom have died of phthisis. She was admitted five months since, with dull percussion of the right apex; at the left, gurgling in respiration and cough. Her case was examined and recorded by two other medical gentlemen before I explored her chest, and my account corresponded with theirs as to the existence of cavity in the left side. To-day two of my colleagues have examined her, and agree with me in the opinion that no sign of cavity can now be detected in that situation. Let me describe the progress of her improvement; the extent of the gurgling gradually lessened, then dry cavernous respiration was the principal sign; this was superseded by blowing, and then bronchial breathing, and at present I detect nothing wrong except a little flattening of contour, slight dulness on percussion, and wavy inspiration. The catamenia have returned; the pulse has sunk from 112 to 80. Her weight five months since was seven stone twelve pounds and a quarter.* It will be observed that this patient gained twenty-one pounds in weight during the space of twenty-one weeks; and it is worthy of notice, that the quantity of cod-liver oil administered during that time was considerably less than three pints; a fact strongly opposed to the opinion that the oil is useful only in the way of nutritive material. Our usual plan is to give one or two drachms twice a day at first, gradually increasing the quantity to half an ounce three times a day, and I have seldom found any advantage accrue from going beyond this limit."

Dr. Thompson's experience is favorable to the use of liquor potassæ, in combination with the oil, especially in the early stage of phthisis. He believes with Dr. Hughes Bennett, that in scrofulous affections a condition of undue acidity of stomach exists unfavorable to the solution of albuminous materials. "Many patients take the oil unmixed, or, when such combinations are appropriate, floated on nitro-muriatic acid mixture, or in lemonade, or in a saline draught during effervescence. The addition of creasote sometimes renders the stomach more tolerant of the remedy." When the stomach absolutely rebels against it, he uses it endermically.

In the sixth lecture the efficiency of other oils is considered.

* This patient continues, at the present time (August, 1853,) in a state of apparent health.

Dr. Thompson found no remedial effects from the use of almond or olive oils. Of cocoa nut oil he has a high opinion. He says :

“The statement made in this lecture regarding vegetable oils requires an important qualification in consequence of experiments which I have made during the first eight months of the present year (1853) with oil of cocoa-nut, which appears to me to possess medicinal properties similar to those of cod-liver oil. The results in the first thirty patients to whom I administered it bear comparison with those obtained in the first thirty-seven patients for whom I prescribed cod-liver oil, chiefly in the year 1845, as related to the Medical Society of London, and briefly described in some of the medical journals. Amongst the patients to whom cocoa-nut oil was given, there were some instances of arrested phthisis, as decided as any I have been accustomed to attribute to the use of cod-liver oil, over which it possesses advantages in reference to economy and palatableness ; and it is interesting to remark that its efficacy was experienced by some who had previously taken cod oil uselessly, and by others who had discontinued it on account of nausea.”

We shall pass over the next three lectures, though they contain much interesting matter, that we may have space to notice the subject of the tenth, viz : the appearance of the gums in consumption. Considerable attention to this inquiry has impressed our author with “a conviction of the frequent existence, in consumptive subjects, of a mark at the reflected edge of the gums, usually deeper in color than the adjoining surface, and producing a festooned appearance, by the accuracy with which it corresponds with the curve of the gingival border ; this mark is in some patients a mere streak ; in others, a margin, sometimes more than a line in breadth. In the most decided cases, this margin is of a vermillion tint, inclining to lake.” A plate of this appearance of the gum is given us. The line is usually most distinct around the incisor teeth, though frequently apparent also round the molars. The author asserts that this streak frequently appears among the earliest signs of phthisis, and he regards its absence as favorable.

“As respects the value of this indication in prognosis, I think you will find it a general rule that the early appearance of the streak is an unfavorable circumstance ; in cases in which this occurs tending to proceed more rapidly than those in which the streak is absent ; whereas freedom from the streak, even in the third stage of the disease, has been particularly noticed in those patients in whom the results of treatment have been most encouraging. Breadth of the discolored margin, and its extension around the molar teeth, you may regard as affording unfavorable indications.

"In reference to diagnosis, there is reason to believe,—

"1st. That the absence of the streak in men affected with inconclusive symptoms of consumption may incline you to a favorable interpretation of any such suspicious indications, but that in women rather less weight is to be attributed to this negative sign.

"2dly. That the presence of the sign in women is almost conclusive evidence of the existence of the tubercular element in the blood.

"When in either sex it coincides with a pulse not materially altered in frequency by change from the sitting to the standing posture, the presence of phthisis may with high probability be assumed, even before having recourse to auscultation.

"The degree in which this appearance exists is not without importance in relation to treatment. When, for instance, the margin is considerable in extent and intensity, it is often advantageous to administer refrigerant remedies, especially salines combined with prussic acid, as a preliminary to the employment of cod-liver oil, or any tonic measures or stimulating diet; and when, as often occurs, diarrhœa accompanies this condition, trisnitrate of bismuth is specially useful. There is reason to believe that the presence of the streak, in some instances, indicates the existence of a tubercular taint in the constitution, before any signs of such a condition can be detected in the lungs. When the streak is absent, whatever be the pectoral symptoms, we have at least one ground for assuming that the constitution is not extensively involved, and we may hope to be able, by the administration of suitable remedies, to promote healthy nutrition, and avert or retard the establishment of phthisis."

The eleventh, twelfth, and thirteenth lectures are upon diseases presenting symptoms resembling those of phthisis, on the causes of consumption and on some of its distressing incidental symptoms. Our readers will perceive the practical nature of the work from the few extracts we have made. In fact, we know of no modern treatise in which, while the physical signs are not neglected, the various manifestations of the disease are so fully discussed. The publishers are entitled to the thanks of its readers for the admirable style in which it is presented to them.

Handbook of Chemistry, Theoretical, Practical, and Technical.

By F. A. ABEL, Professor of Chemistry at the Royal Military Academy, Woolwich, and C. L. BLOXAM, formerly First Assistant to the Royal College of Chemistry. *With a preface by* DR. HOFFMAN. Philadelphia: Blanchard & Lea, 1854.

On opening the work before us, we are reminded of a fault of more frequent occurrence in treatises on Chemistry, than on any other branch of science. We allude to the want of a clear con-

ception on the part of the author of the object or purpose to be fulfilled by his publication. The difficulty is not what should be *inserted*, but what can be *omitted*. The subject matter of the science is so unlimited, and the uses to which it is applied so manifold, that it is impossible for one volume, or indeed one treatise, to be at the same time a text book for the medical student, a hand-book for the analytical chemist, and a dictionary of arts for the practical man and general reader. On taking up a work, therefore, which claims for itself higher rank than a mere sketch of the science (which must necessarily be superficial) we cannot but be disappointed when we find several branches of Chemistry included in one volume, to do justice to which a dozen would scarcely be sufficient. The title of the work under question "The Hand-book of Chemistry" led us to suppose it was a treatise on the science of chemistry generally, organic and inorganic. We were therefore surprised to find the former entirely omitted, the more so, since the authors say very properly in their introduction, "The science of chemistry is usually divided into two branches, *inorganic* and organic chemistry; as a convenient mode of classifying our knowledge this division is useful, but as a natural and absolute separation it has no existence; for the two classes of substances, inorganic and organic, so verge into each other, so many so-called organic substances are found capable of being prepared by inorganic methods, that the boundary line is day by day becoming fainter and will perhaps in time vanish altogether." The title of the work should, therefore, be "The Hand-book of Inorganic Chemistry."

The book opens with the usual definitions of the science. Specific gravity and the means used for its determinations; the explanation of chemical terms; equivalents, affinity, nomenclature, and notation are next given. A chapter on crystallization and crystallography closes this, the introductory portion of the work. Instructions in chemical manipulation, the arrangement of apparatus, collection of gases, management and application of heat come next, occupying about one-eighth of the book, very useful as far as they go, though, from the limited space, of course not equal to Farraday's manipulations, or to Moffat's book on the same subject. The usual systematic course of the

elements and their inorganic compounds then commences, and contains all the new discoveries and additions of note, the whole subject being well arranged and treated more at length and in detail than is customary in the English *Chemistries*. Interspersed through this part are the outlines of the practical manufacture of sundry articles; for instance, glass, gunpowder, iron, etc., which, we think, might have been omitted without injury, as they take up in the aggregate considerable room, and although of some general interest, are out of place and do not add to the real value of the book. The remainder of the book, about one fourth of the whole, is devoted to instruction in qualitative and quantitative analysis, with directions for experimental analysis for the practice of the student, preceded by descriptions of the necessary apparatus, etc. The analysis of soils, ores, mineral waters, etc. closes the volume.

It is to this latter part, *i. e.* analytical chemistry, that the value of the work is due, and to which the rest of the book is subservient. It is evident that the authors are practically familiar with the subject, and have given their personal experience to guide the student. The choice of subjects for examination, the lists of re-agents, and directions for the detection of the various substances as suspected, are clear and satisfactory, and render the book a useful guide and assistant to the student in analysis.

The book is thus divided into three independent treatises, viz.: first, Chemical Manipulation; second, Systematic description of the elements and their inorganic compounds; and lastly, Analytical Chemistry. These would seem to be quite enough to group together into one volume, without also adding manufacturing processes, that can be but of little use to the analyst, for whose benefit the work is intended. The theory of the operations would have been sufficient, at least, in the present case. As a necessary consequence, something must be omitted to keep the book within reasonable limits, and the chemistry of vegetable and animal life, and of the compounds described therefrom, has been chosen as a subject readily dispensed with, without hurting the general plan of the work, and is therefore left out, of course much to the detriment of its practical value, particularly to the physician. Directions for the detection of a few organic sub-

stances are given ; for instance, the tartrates, citrates, urates and their respective acids, and a few other compounds, but too limited to be of much value.

We notice a few errors that a little care might have avoided ; for instance, the composition of tartrate of lime is given ($2\text{Ca O } \bar{\text{T}}$) instead of ($2\text{Ca O } \bar{\text{T}} + 8\text{Aq.}$) As tartrate of lime is generally used for the quantitative determination of tartaric acid, the error is important. Again, in describing the manufacture of pot and pearl ash, the process of making pot-ash is confounded with that for pearl ash, and pearl ash is mentioned as the product of a process, which is really that for obtaining salt of tartar.

The American edition has the advantage over the English one, in being illustrated with numerous wood cuts, showing the construction and form of apparatus, the shape of crystals, etc., the cuts being mostly taken from the American editions of Fowne's and of Regnault's *Chemistries*. The English edition was without illustrations. The print and paper are good, and the work neatly bound ; it forms on the whole, a useful addition to the library of the experimental student.

TRANSACTIONS OF THE AMERICAN MEDICAL ASSOCIATION.

(Concluded.)

On Acute and Chronic Diseases of the Neck of the Uterus. By CHAS. D. MEIGS, of Philadelphia.

This report, comprising 51 pages, illustrated by several colored engravings, was not intended by the author to present a complete summary of what has been written upon the subject, but was prepared merely to serve as a useful aid to clinical practice in an extensive department of disease. We need hardly inform the reader, that Dr. Meigs' treatment of the subject exhibits his accustomed originality, nor that his style is dainty and unique, as is its usual characteristic. After stating that the re-actions of the re-productive organs upon the other members of the human economy are so many and great that "changes in their vital status, even such as are inappreciable, except by the understanding, greatly affect both the mind and body of the woman," he says, "a dark and mysterious veil hides from us many of the laws that grow out of

the intimate relation and mutual dependence existing between the conservative or genetic forces of animals, and their reproductive or genetic powers." "Many stumbling-blocks in the path of the practitioner would be taken away, if these laws and relations could be fully understood; and we should then be able to take more precise indications, and adopt more positive methods of treatment. Possessing full anatomical and physiological information upon those organs and forces, we might raise up in the mind a true *ideal* of them, which would serve as a standard or scale by which to measure and judge every aberration of form, power or place, in the instances brought before us."

"A perfect ideal of the normal womb, one fit to serve as a standard, or scale of comparison or measurement for cases, should comprise, in addition to a notion of its elements, one of its form, volume, place, posture in that place, sensibility, resistance, complexion and all its powers, as well as its anatomical relations or connection." As a help to the formation of this ideal standard, several figures copied from nature with explanations, are given us of the womb and its relative position in the pelvis.

One of the most common of sexual disorders is leucorrhœa. Most women suffer from this affection at some period of their lives. In general, it is not profuse and ceases spontaneously. When the discharge consists only of vaginal products it is of little consequence. It is hurtful only when it comes from the canal of the cervix. The discharge differs according to its seat. "The muciparous glands of the vagina furnish either a thin watery mucus, or one of a creamy consistence, which, in other instances, is almost butyraceous or concrete.

The excretion from the follicles and glands of the canal of the neck is always gluey or albuminous, and resembles fresh white of eggs; and when the patient, in describing the disorder, informs us that she discovers a slimy mucus, and especially if it appears at intervals of once a day or oftener, we may take it for granted that she labors under inflammation of the neck of the womb."

The lassitude and debility accompanying leucorrhœa is not the effect of the excessive secretion, but is due to "the disturbing effect in the general economy, produced by even slight modifications of the health of the uterus." Serious cases are

cases of disease of the cervix, and are to be treated accordingly. For the diagnosis of the affection, the touch, "where it gives sufficient information, may suffice; if there be any doubt, the speculum must be used. The most reliable metro-scope, probably, is a slightly conical tube of silver, six inches and a half in length. The uterine extremity should be one inch in diameter, bevelled with an angle of thirty-five or forty degrees; the outer or larger extremity should be one inch and a half in diameter. The silver should be highly polished, with the edges of the bevelled end rolled and rendered blunt, lest they might catch in the folds of the membrane, or even wound the cervix.

An olive shaped piece of wood, secured in a steel handle, and made to fit accurately in the smaller extremity of the cone, serves to conduct it without pain to the bottom of the vagina, whereupon it is withdrawn, in order that the surgical neck may engage in the opening, and thus enable the surgeon to discern any marks of disease there.

The light passing down the tube ought to be as clear as possible, and the inner surface of the metro-scope ought not to have a very high polish, lest serving as a reflector, it should pour a flood of chromitized light on the parts, and thus give rise to the greatest misapprehension of their real condition. It would be better to have the inner surface painted with black, in order that no reflection from the walls should deceive us, and lead to error."

"There should be provided a speculum forceps, and some small bits of moistened sponge, which being held in the forceps, serve to absorb or remove any mucus or slime or sanguineous excretion. The most convenient one is a "bullet forceps." If an examination be now made to determine the cause of the leucorrhœa, we shall rarely fail to observe a positive inflammation of the cervix and os uteri, or to notice a plug of viscid phlegm in or issuing from the os. One or both lips of the womb will be found tumid, softened, granulated, and of a uniform red. Plates exhibiting these appearances (inflammation of the cervix and partial and general hypertrophy of the womb) are given, and the cases described in which they occurred.

The remedy advised is "antiphlogistic contacts of the nitrate of silver." To apply these properly, the practitioner "must

create for himself an *ideal* of his operation, so that when about to perform it, he may predetermine what it is he hath to do, and whether the contact he is going to make shall be a destructive or an antiphlogistic one.

"The absence of precision in the design and act, frequently occasions the greatest and most poignant suffering, which, in our estimation, is wicked and abominable; they are disgraceful to the art and the artist at once."

Dr. Meigs' large experience has satisfied him that ulceration of the womb is among the rarest of disorders. The framboisée inflammation and hypertrophies have been taken for ulcerations, the superficies being covered with a delicate epithelium, very liable to give way under unskilful manipulation.

"A proper antiphlogistic and resolvent contact of the crayon ought not to destroy even this delicate epithelium; but rather to make it more firm and dense, and so planish, as it were, the unevenness down to the normal surface level. In this way we may compel the densy or tubercular eminences to sink down again to their place, and give, by solidifying the epithelium, a firm physical delimitary support to the before debilitated capillaries that rise up in the form of a soft molluscum."

As another consequence of uterine irritation and hypertrophy, retroversion frequently takes place. Dr. Meigs is convinced that it constitutes seventy-five per cent. of all cases of sexual disorder, of a gravity sufficient to require appeal to medical advice. Retention of urine, a common habit with women, is the most frequent cause of this affection.

Several interesting cases of retroversion and of small bleeding tumors attached to the os by a delicate peduncle, accompanied with hypertrophy of the womb, are here detailed. Of the treatment of retroversion, he observes:

"An immense use has been made of the globe pessary; and certainly, in a simple prolapsus uteri, it answers admirably. But it does not answer well for the cases of retroversion." For these Dr. Meigs recommends a circular pessary, made of watch spring, wound round with bobbin. This is to be dipped in melted virgin wax and then polished. Being elastic it can easily be introduced by compressing the sides. Properly lodged, according to Dr. Meigs, it renders retroversion impossible.

We have given a very slight sketch of Dr. Meigs' report. It is well worthy of study by the profession, containing, as it does, much valuable information on the subject of which it treats, written in a lively and agreeable style.

We here conclude our notice of the transactions. The volume contains a number of other reports worthy the attention of our readers, but for which we must refer them to the book, our limits forbidding further mention.

MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA.

The Medical Society of the State of Pennsylvania, met on Wednesday, May 31st, 1854, at the Court House in the City of Pottsville, and, in the absence of the President, was called to order by the Vice President, Dr. CONFER, at 11 o'clock, A. M.

The following were appointed a Committee, to examine and report on the credentials of Delegates:—JOHN NEILL, Philadelphia Co.; C. W. PARRISH, Chester Co.: WM. MAYBURY, Philadelphia Co.

On motion of Dr. WEST, Dr. D. FRANCIS CONDIE, of Philadelphia County, was appointed Recording Secretary, pro tempore, to supply the vacancy occasioned by the death of Dr. Henry S. Patterson.

The following delegates answered to their names.

Berks County—C. H. Hunter, E. Kitchen, W. T. Bladen, Martin Luther, J. H. Spatz.

Bradford—Geo. F. Horter.

Blair—J. M. Confer.

Bucks—Jno. Dyer, Jr.

Chester—C. W. Parrish, S. A. Ogier, W. W. Townsend, Chas. E. Coates, A. K. Gaston, J. R. Walker.

Delaware—R. K. Smith.

Huntingdon—H. K. Neff.

Lancaster—H. Carpenter, P. Cassady.

Lebanon—B. F. Schneck, W. Moore Guilford.

Lehigh—Chas. E. Hoffman, David O. Mosser.

Mifflin—T. Mitchell, E. W. Hale.

Montgomery—Jno. A. Martin, Winthrop Sargent, Jno. Schrack, Hiram Corson, Lewis W. Read, Wm. A. Van Buskirk.

Northampton—R. E. James, Charles Innes.

Perry—J. H. Case, James Galbraith.

Philadelphia—T. E. Beesley, T. F. Betton, D. Francis Condie, J. M. Greene, H. Hartshorne, S. L. Hollingsworth, Jacob Huckel, B. S. Janney, Wilson Jewell, A. L. Kennedy, Samuel Lewis, W. Maybury, John Neill, J. M. Pugh, W. S. W. Ruschenberger, M. B. Smith, R. P. Thomas, Francis West, Geo. B. Wood.

Schuylkill Co.—A. Heger, Wm. Housel, J. W. Gibbs, J. F. Frechte, J. G. Kochler, J. H. Wythes.

Total present 59.

The Committee on Credentials reported, that there was no delegate accredited from Huntingdon county Medical Society. Dr. H. K. Neff, of that county, and an Associate of this Society, was, however, in attendance, and the Committee recommended that he be received and recognized as a delegate. Upon motion of Dr. Neill the said recommendation was approved.

On motion of Dr. Pugh, the reading of the minutes of the last annual session was dispensed with, and the same were, on motion of Dr. Thomas, referred to a committee, consisting of Drs. Thomas and Ruschenberger, of Philadelphia, and Carpenter, of Lancaster, to report any unfinished business that may appear therein.

The Committee of Publication presented their report, as follows :

The Committee of Publication beg leave to report that they have had printed seven hundred and fifty copies of the Transactions of the State Society, at its session of 1853. The expense of which was \$262 15.

The copies were distributed to the several County Societies represented, in proportion, as nearly as could be done, to the number of their members respectively.

It would be a desirable thing, could it be accomplished, to place at the disposal of the Committee of Publication a fund, that would enable them to print a sufficiently large edition of volumes of Transactions, to supply a copy to each member of the several societies represented at the sessions of the State Society.

Signed, on behalf of the Committee, by

Dr. D. FRANCIS CONDIE, Chairman.

The report was received and ordered to be inserted on the minutes.

The Treasurer, Dr. WEST, presented his report, which was referred to an auditing committee consisting of Drs. C. W. PARRISH, W. A. VAN BUSKIRK, and E. W. HALE.

The Committee on Unfinished Business presented the following report :

The Committee appointed to present from the minutes of the last session such items of unfinished business as may appear thereon, respectfully report, that they find reports to be due from the following committees, namely :

1. A Committee, consisting of Drs. BIDDLE, PARRY and CARSON, appointed to report on the resolutions of the Berks County Medical Society, relative to the collection of samples of drugs and preparations (see printed Minutes of 1853, page 12.)

2. A Committee on gratuitous vaccination throughout the State, Dr. G. EMERSON, Chairman, appointed in 1852, and continued in 1853, with direction to report at the present session, (see printed Minutes, 1853, pp. 15, 19.)

3. A Committee, consisting of Drs. PARRY, CASSADY and CARPENTER, on vaccination and the preservation of kine-pock, (see printed Minutes of 1853, page 21.)

Signed, R. P. THOMAS,

W. S. W. RUSCHENBERGER.

HENRY CARPENTER.

Dr. HOLLINGSWORTH, on behalf of the Chairman on samples of drugs, etc., tendered an apology for the non-presentation of the report, when, on motion, the Committee was continued, with instructions to report at the next session.

Dr. CARPENTER, on behalf of the Committee on vaccination and the preservation of vaccine matter, stated that the committee had not been able to prepare, in time for presentation at the present session, all the materials for their report, but hoped to be able to have it completed by the next session.

The Committee on the Gratuitous Vaccination of the Poor, presented the following report :

The Committee appointed to memorialize the Legislature of the State for the passage of an act to provide for the gratuitous vaccination of the poor throughout this Commonwealth, report :

That, since their previous report, having given to the subject entrusted to them more mature consideration, they are persuaded that the main object originally contemplated by this Society, namely, the universal extension of the protection afforded by vaccination to the entire population of our State, may be more effectually secured through the efforts of the authorities entrusted with the management of public affairs in the several counties, than by officers appointed by the State government. The duty of providing for the poor is entrusted to the respective counties, as well as the direction and control of the public schools. The committee feel persuaded that, by the combined action of the county officers and the directors of the public schools, with the powers already delegated to them, much may be effected towards promoting a more general extension of the protection afforded by vaccination throughout the State. To carry out these views, they therefore offer the following resolution :

Resolved, That in order to extend the benefits of vaccination as far as possible among the inhabitants of this Commonwealth, the State Medical Society urge upon the several organized County Societies throughout the State, to use their influence to induce the public authorities of their respective counties to adopt prompt measures for as general an extension of vaccination as may be practicable ; and to render it imperative upon those who are charged with the direction or superintendence of schools, public as well as private, to require, before receiving any pupil, a written certificate from some properly authorized physician, that he or she has undergone successful vaccination.

Signed, G. EMERSON,
D. FRANCIS CONDIE.
WILSON JEWELL.

On motion of Dr. CARPENTER, the report was received, and the resolution appended thereunto was unanimously adopted. On motion of Dr. BETTON, it was resolved, that the said report be printed, and a copy thereof sent to each of the County Societies now organized in the State, and where no society is organized, to the Superintendent of the Public Schools of such county.

The Secretary, Dr. I. R. WALKER, reported that he had fulfilled the duty enjoined upon him by the resolution of last session, recorded on page 16 of the printed Minutes.

On motion of Dr. HOLLINGSWORTH, it was resolved, That a committee of one from each county delegation in attendance, to be selected by the respective delegations, be appointed to nominate officers for the ensuing year.

On motion of Dr. CONDIE, it was resolved, That the appointment of of said committee be postponed until to morrow morning.

On motion of Dr. JEWELL, it was resolved, That the said committee be empowered also, to select a place for the meeting of the Society in 1855.

The Committee appointed to audit the accounts of the Treasurer, made the following report:

The committee appointed to audit the account of the Treasurer have performed that duty, and report that, at the time the account was made up by that officer there was a balance in his hands due the Society of thirty-three dollars; since the meeting of the present session he has received the assessments due from Lebanon, Mifflin and Bradford County Medical Societies, leaving now in his hands a balance due the Society of sixty-two dollars. Assessments are still due from Erie, Lycoming, Mercer and York County Medical Societies.

Signed, C. W. PARRISH,
W. A. VAN BUSKIRK,
E. W. HALE.

On motion of Dr. THOMAS, it was resolved, That the meetings of this session shall be from 9 to 12 o'clock in the morning, and from 4 to 6 o'clock in the afternoon.

On motion, resolved, That the President be requested to deliver his address this afternoon, immediately after the reading of the Minutes.

Afternoon Session, May 31st, 1854.

The minutes of the morning session were read and approved.

The President, Dr. JOHN P. HIESTER, read the Annual Address.

On motion of Dr. JEWELL, it was resolved, That the thanks of this Society be presented to Dr. HIESTER for his very able address, and that a copy of the same be requested for publication in the Transactions of the Society, it being understood that Dr. Hiester have permission to make, first, such alterations in said address as he may deem necessary and proper.

The Report of the Berks and Blair County Medical Societies were presented and read, and, on motion, referred to the Committee of Publication.

June 1st, 1854.

The minutes of yesterday afternoon session were read and approved.

On motion of Dr. KENNEDY, a Committee (Drs. A. L. KENNEDY, D. F. CONDIE, S. L. HOLLINGSWORTH) was appointed to prepare and

submit to the next annual session of this Society, forms of printed blanks for County reports. Said blanks to be so worded as to facilitate the preparations of the reports, and to secure greater fulness and uniformity therein.

The following were announced as constituting the Committee of Nomination:—

W. T. Bladen, Berks; R. K. Smith, Delaware; E. W. Hale, Mifflin; G. F. Horter, Bradford; H. K. Neff, Huntingdon; J. A. Martin, Montgomery; J. M. Confer, Blair; H. Carpenter, Lancaster; C. Innes, Northampton; J. Dyer, Jr., Bucks; B. F. Schneck, Lebanon; J. H. Case, Perry; W. W. Townsend, Chester; D. O. Mosser, Lehigh; S. L. Hollingsworth, Philada.; J. G. Koehler, Schuylkill.

On motion of Dr. CASSADY, a Committee (consisting of Drs. M. B. SMITH, H. CARPENTER and WM. MAYBURY) on obituary notices of deceased members of County Societies, was appointed, with instructions to report this afternoon.

Dr. BETTON offered the following amendment to the Constitution, Art. III., Sec. 2, to insert after the word "societies," in the second line, the words "except in the case of the Philadelphia County Medical Society, which shall hereafter be recognized as the Philadelphia City Medical Society."

Various other amendments to meet the case of the Philadelphia County Society, under the change in the political organization of Philadelphia County, were suggested, when, on motion of Dr. JEWELL, the whole subject was referred to the Philadelphia delegation, with instructions to report at the afternoon session.

The following resolutions were presented by Dr. WYTHES, and, on motion of Dr. CONDIE, referred to the Committee on Forms for County Reports.

Resolved, 1st. That the County Societies are recommended to appoint their annual committees to prepare reports as early as practicable after the meeting of the State Society; and that said committees be subdivided into sections having reference to the different topics of medical information, viz., Pathology and Therapeutics, Surgery, Midwifery.

2d. Papers read before County Societies should be referred to the appropriate section of the committee, to be used by it in the preparation of the annual report. Papers of more than ordinary merit or interest, to be reported at length, or an abstract made of them at the option of the society.

3d. It is desirable that the reports from the County Societies should furnish, in addition to the general information referred to above, as much statistical intelligence as possible with reference to their respective topics, and the localities of their societies.

The reports from the Bradford, Chester, Delaware, Huntingdon, Lebanon, Lehigh, Mifflin and Montgomery County Medical Societies were presented and read, and, on motion, referred to the Committee of Publication.

Afternoon Session, June 1st, 1854.

The minutes of the morning session were read and approved.

The Philadelphia County delegation, to whom the subject was referred, presented the following Preamble and Resolution :

Whereas, The recent action of the Legislature of Pennsylvania has consolidated the City and districts of Philadelphia under one municipal government, therefore

Resolved, That should the Philadelphia County Medical Society consider it expedient to re-organize, and to change their title in correspondence with the new political organization of the County, it shall have, when thus reorganized, all the rights and privileges of the present Philadelphia County Society ; and that the Constitution of this State Society be amended, by inserting in the second line of Sec. 2, Art. III., the words "and from the Philadelphia City Medical Society."

On motion of Dr. CONDIE, the said resolution, including the amendment to the Constitution, was unanimously adopted.

The Committee on Nomination of Officers reported as follows :

President—JACOB M. GEMMILL, of Huntingdon Co.

Vice Presidents—WILSON JEWELL, Philadelphia Co. ; E. W. HALE, Mifflin Co. ; WM. HOUSEL, Schuylkill Co. ; A. K. GASTON, Chester Co.

Recording Secretaries—D. FRANCIS CONDIE, Philadelphia Co. ; H. CARPENTER, Lancaster Co.

Corresponding Secretary—JOHN NEILL, Philadelphia Co.

Censors, 1st and 2d Districts—J. B. Biddle, Philadelphia ; J. T. Huddleson, Delaware ; Hiram Corson, Montgomery ; G. F. Horton, Bradford ; P. Cassady, Lancaster ; Wm. Griess, Berks ; Chas. H. Martin, Lehigh ; R. E. James, Northampton.

3d and 4th Districts—Thos. Wood, Lycoming ; J. B. Luden, Huntingdon ; Jos. Henderson, Mifflin ; W. W. Melvaine, York ; J. H. Case, Perry.

5th and 6th Districts—J. P. Gazzam, Alleghany ; W. Anderson, Alleghany ; Jas. Dickson, Alleghany ; C. F. Perkins, Erie ; J. T. Ray, Mercer.

Delegates to the American Medical Association—J. P. Hiester, Berks ; W. W. Townsend, Chester ; Chas. Innes, Northampton ; John G. Koehler, Schuylkill ; J. H. Dorsey, Huntingdon ; Henry Carpenter, Lancaster ; John A. Martin, Montgomery ; David Mosser, Lehigh ; Jas. Galbraith, Perry ; Jacob M. Confer, Blair ; R. K. Smith, Delaware ; Joseph Henderson, Mifflin.

The Committee also reported that they had selected Hollidaysburg as the place of meeting of the Society in 1855.

On motion of Dr. CONDIE, the Committee was continued, with instructions to nominate the additional members of the Publication Committee.

The reports of the Perry County Medical Society, Philadelphia County Medical Society and Schuylkill County Medical Society were presented and read, and, on motion, referred to the Committee of Publication.

The Committee of Nomination reported that they had selected the

following gentlemen to compose, with the Recording Secretaries and Treasurer, the Committee of Publication:

FRANCIS G. SMITH, Philadelphia; SAMUEL LEWIS, Philadelphia; ROBERT P. THOMAS, Philadelphia.

The Committee on Obituary Notices presented the following report;

The Committee on obituary notices of deceased members of County Societies beg leave to report, that they have given to the subject all the attention which the short time allotted to them for its consideration would admit, and have come to the conclusion that the object contemplated would be most effectually obtained by the several County Societies presenting in their annual reports a short notice of such members of their societies respectively, as have died during the year. The Committee therefore recommend the adoption of the following resolution:

Resolved, That the several County Medical Societies be earnestly solicited to append to their annual reports brief notices of such of their members as may have died during the year.

Signed, MOSES B. SMITH,
WM. MAYBURY,
HENRY CARPENTER.

The report was accepted, and the resolution adopted.

Dr. PARRISH, on behalf of the Chester County Medical Society, presented the following questions:

1st. Does dysentery prevail most in those sections of country in which there is little or no iron in the soil?

2d. Do paralysis and other nervous affections prevail most in those sections of country in which iron is diffused throughout the soil?

3d. Does the clearing off of timber tend to increase affections both of the nerves and of the intestines? and, if so why?

On motion of Dr. OGIER, the said questions were referred to a special Committee, with Dr. A. K. Gaston as Chairman. In addition to whom the President appointed Drs. W. M. Guilford of Lebanon, A. Heger of Schuylkill, L. E. Kitchen of Berks, and Chas. E. Hoffman of Lehigh.

Dr. CORSON presented the following resolution, which, on motion of Dr. WYTHES, was referred to the Committee on forms for County reports:

Resolved, That it should always be distinctly stated in those County reports, in which reference is made to the influence of limestone formations in the production or modification of diseases, whether the limestone lies near the surface or at a great depth, and if the latter is the case, what covers it. Also, whether the water used for drinking and cooking is impregnated with calcareous matter.

Dr. R. K. SMITH presented the following preamble and resolutions, which were adopted:

Whereas, At the session of the State Medical Society in 1852, a preamble and resolutions, offered by Dr. Emerson, were adopted, urging upon the members of the Medical profession the importance of our present County organization; which preamble and resolutions were re-adopted at the session of 1853, and whereas, the duty therein enjoined

upon the President and Secretary of this Society does not appear to have been fulfilled. Therefore

Resolved, That the aforesaid preamble and resolutions be again sanctioned by this Society, and the Secretary be requested to communicate a copy of the same to each County Society in the State, and in the Counties in which societies are not organized, to such members of the profession as he may deem proper.

Resolved, That the Committee of Publication be authorized to assess upon the County a sum sufficient to carry the foregoing resolution into effect.

Dr. CARPENTER, of Lancaster, stated, that the copy of Transactions ordered to be sent to the "London Epidemiological Society," was transmitted by Dr. ATLEE; the Society have acknowledged its receipt, and send in return a vote of thanks, accompanied with a copy of a report "on the state of small pox and vaccination in England, Wales and other countries, and on compulsory vaccination," a report comprising the most interesting features of which, will be made to this Society at a future period.

Dr. BLADEN, of Berks, presented the following resolution, which, on motion of Dr. THOMAS, was laid on the table.

Resolved, That this Society most cordially approves of the resolutions adopted by the Medical Society of the City of Reading and County of Berks, in regard to individuals whose names are found on the "Black List" of Physicians; and that it is hereby recommended to all the County Societies within the State to adopt a similar measure.

A list of the officers and members of the Lancaster County Medical Society was presented and ordered on file.

On motion of Dr. WALKER, it was Resolved, That the Constitution and By-Laws of this Society, and the Code of Ethics, be appended to the next volume of Transactions.

On motion of Dr. WEST, it was Resolved, That the Committee of Publication be instructed to prefix, hereafter, to each annual volume of the Transactions of this Society, a statement to the effect that the Medical Society of the State of Pennsylvania does not hold itself responsible for the facts and opinions contained in any address or report which may be made to it and ordered for publication in its Transactions.

On motion of Dr. THOMAS, the resolution offered by Dr. Emerson at the last session of this Society and indefinitely postponed, (see page 16 printed Minutes,) was taken up and passed.

Dr. MAYBERRY presented the following preamble and resolutions, which were unanimously adopted:

Whereas, It has pleased our Creator, in his infinite wisdom, to remove from this temporary sphere of probation to his eternal home, Dr. HENRY S. PATTERSON, our late efficient *Secretary* and highly gifted colleague; therefore *Resolved*, That this Society has received with unfeigned regret the intelligence of the death of Dr. Patterson in the prime of life and usefulness, and that, in common with the Medical profession of this State, we deeply deplore the irreparable loss which, by

this afflictive dispensation, the interests of medical science and of medical organization have sustained.

Resolved, That a copy of the preceding preamble and resolution be transmitted to the family of the deceased, with the condolence of this Society on their sad bereavement.

Dr. HENRY CARPENTER presented the following preamble and resolutions, which were unanimously adopted.

Whereas, It has been the will of an All-Wise Providence to remove by death from among us our much esteemed and deeply lamented friend and colleague, Dr. FRANCIS S. BURROWES, of Lancaster, a most zealous and useful member, and one of the Vice Presidents of this Society, it becomes the melancholy duty of his surviving associates to express their sincere sorrow for the loss they have sustained, of one so distinguished for his ability as a physician, his high character for virtue and integrity as a man, and his many endearing qualities as a companion and a friend. Therefore, *Resolved*, That this Society has heard with deep regret of the decease of their late associate and professional brother; and, while they will ever hold in lively remembrance the recollection of his many virtues, they offer to his family and friends their heartfelt condolence and sympathy.

Resolved, That the Recording Secretaries transmit to the family of the deceased a copy of the foregoing.

Dr. MOSES B. SMITH presented the following preamble and resolutions, which were unanimously adopted.

Whereas, It has pleased our Heavenly Father, in his inscrutable wisdom to remove from works to rewards, since our last annual meeting, another of the convention that organized this Society, Dr. JOSEPH D. STEWART, of the City of Philadelphia, and for some time the resident physician of the Philadelphia Hospital, Blockley; therefore, *Resolved*, That, in the death of Dr. Stewart, this Society and the community at large have lost one of the most useful, amiable, and upright of their members, and that, in this afflictive dispensation of Divine Providence, we heartily sympathize with the bereaved and mourning family of the deceased. *Resolved*, That a copy of this minute be forwarded to the family of the deceased, as a testimony of the high estimation in which he was held by us.

On motion of Dr. R. K. SMITH, it was unanimously resolved, that the officers reported by the Committee of Nomination, be and they are hereby declared to be the officers of this Society for the ensuing year.

On motion of Dr. CARPENTER, the thanks of the Society were tendered to Dr. Hiester, its President, and to the other officers for the able and courteous manner in which they have performed their respective duties.

On motion of Dr. CONDIE, the thanks of the Society were presented to the Commissioners of Schuylkill County for the use of the very beautiful and commodious room in the Court House at Pottsville, for its sessions of the present year.

On motion of Dr. KENNEDY, it was Resolved, that the thanks of this Society be tendered to the Medical profession of Pottsville, for the

cordial and hospitable manner in which they provided for the accommodation of the Sessions of the Society, and the attentions bestowed by them upon its members.

On motion of Dr. CARPENTER, it was Resolved, that the next meeting of the State Society be held on the last Wednesday of May, 1855, at 10 o'clock, A. M., in Hollidaysburg.

Adjourned.

THE MEDICAL EXAMINER.

PHILADELPHIA, JULY, 1854.

A full report of the proceedings of our State Medical Society, recently held at Pottsville, will be found in the present number. Sixteen Societies were represented, 59 delegates registering their names. A number of valuable reports were presented and read, and certain resolutions were passed, which will, if observed, greatly increase the value of its medical proceedings. We allude to the recommendations to County Societies on the proper method of preparing their reports, &c.

For the hospitality and kindness extended to us by the resident physicians, we tender our warmest thanks, and are sure that in so doing we but express the feeling of all our medical brethren who were present. The pure air and beautiful scenery of Pottsville, in the "leafy month" in which we visited it, presented to the Philadelphia delegation a most enviable and refreshing contrast to the confined atmosphere and crowded marts of their city.

The meeting lasted two days, and we are happy to state was in all respects an harmonious and satisfactory one.

MEDICAL NEWS.

MEDICAL DEPARTMENT OF PENNSYLVANIA COLLEGE.—We learn, with much pleasure, that the Trustees of this Institution have lately appointed DRS. ALFRED STILLÉ and JOHN NEILL to the Chairs of *Practice of Medicine* and *Surgery*. These selections are eminently judicious, and must greatly strengthen the School. Dr. Stillé is one of the physicians of St. Joseph's Hospital, of this city, and was for many years

Lecturer on the Practice of Medicine in the Philadelphia Association for Medical Instruction, in both of which positions he has acquired a high reputation as a sound and eloquent teacher. Dr. Stillé is also well known to the profession as a frequent contributor to our medical literature. His work on Pathology is highly esteemed, and his Report on Medical Literature, presented some years ago to the American Medical Association, will long be remembered as one of the most brilliant papers ever recorded in its Transactions.

Dr. NEILL, we think we may safely say, combines many qualifications for the responsible chair which he has accepted. He was for several years Demonstrator of Anatomy in the University of Pennsylvania, and there established a reputation as one of the best anatomists and lecturers in our country. For some years he has occupied the situation of Surgeon to the Pennsylvania Hospital, and has delivered several courses on Clinical Surgery. From his position in this great school of Surgery, and from his long experience as a lecturer both on Anatomy and Surgery, Dr. NEILL's success as a Lecturer on the Principles and Practice of Surgery may be confidently predicted.

The late partial re-organization of the Medical Department of Pennsylvania College appears to us to have resulted in the construction of a Faculty of great strength. Prof. GILBERT has been at his own request, we learn, transferred from the Chair of Surgery to that of Obstetrics, in which department his large practical experience must give him great weight as a teacher. The branches of Anatomy, Chemistry, Institutes, and Materia Medica, in the hands of Profs. ALLEN, REESE, F. G. SMITH, and BIDDLE, will not suffer by comparison with any other institution. And we are well assured that the energy, ability, and industry, which are now centred in this organization, must soon place it in the foremost rank among the medical schools.

MEDICAL COLLEGE OF VIRGINIA.—The visitors appointed by the State Legislature for the governance of this Institution, have selected Dr. BEVERLY R. WELLFORD, of Fredericksburg, to fill the Chair of Materia Medica, and M. BROWN SÉQUARD as Professor of the Institutes of Medicine. Both of these gentlemen are favorably known to the profession throughout the United States, Dr. Wellford as President of the American Medical Association during the session of 1852, and M. Séquard as lecturer on Physiology, to which department of science he has added many original and valuable contributions.

Dr. G. A. Otis having removed from the State has resigned the editorship of the Virginia Medical and Surgical Journal. The readers of the Journal have cause to regret the retirement of so able and sprightly a writer. Dr. J. F. Peebles, of Petersburg, associated with Dr. J. B. McCaw, are the present editors. We most heartily wish them success in their undertaking.

The following extract from the editorial of Dr. H. D. Bulkley, of the New York Medical Times on the late meeting of the American Medical Association, evinces so kind and courteous a spirit towards our city, that we take great pleasure in laying it before our readers:—

“The only occurrence which seems to have at all disturbed the harmony of the meeting was the transfer of the Publication Committee from Philadelphia to this city; the discussion of which is said to have elicited some personal and sectional feeling, while the decision led to the offer of the resignation, by his colleagues, of Dr. Condie, as Treasurer of the Association. We regret this measure on many accounts, the more especially as it will have a tendency to mar the cordial feeling which should exist between the sister cities, and will be particularly unpleasant when we visit them, as many of us hope to do, next year, and partake of their hospitalities. The Association at first refused to accept the report of the Nominating Committee in favor of the change; but it was subsequently adopted, after a second long and rather warm discussion in the committee of the whole. The change is said to have been made in accordance with the expressed wishes of the New York Delegation; and if so, we cannot believe that they fairly represented the wishes of their constituents. At least, we have never heard of any expression of opinion to that effect, and know that the measure is regretted by some of the strong friends of the Association among us.”

In the “Bulletin Bibliographique,” No. 4, of April 1854, an advertising sheet of the new books published in Paris, we find (page 5, No. 393,) the following.”

Mémoire sur le traitement des fractures non réunies et des difformités des os, par Daniel Brainard. 1 vol. in 8, 3 fr.

In the “Feuilleton du Journal de la Librairie,” No. 18, of May 6th, 1854, the same treatise is thus advertised—“Mémoire sur le traitement des Fractures non réunies et des difformités des os, par le docteur D. Brainard, professeur de Chirurgie au Collège Médical de l’Illinois, à Chicago, Chirurgien de l’hôpital général, etc. Grand in 8v. de 72 pages, avec 2 planches gravées . . . 3.00. Is this the same treatise to which the American Medical Association awarded a prize at its last session, entitled “an Essay on a new method of treating Ununited fractures and certain Deformities of the Osseous system?”

RECORD OF MEDICAL SCIENCE.

Dr. Ayre's Treatment of Cholera.

I shall here briefly repeat, for the sake of obviating all misconception on the subject, the leading particulars of what is denominated my plan of treatment, and which consists in the stage of collapse of giving one or two grains of calomel every five or ten minutes, with one or two drops of laudanum with the first few doses of the drug, and in perseveringly continuing the same dose at the same intervals of time, until the symptoms of collapse become materially subdued. This plan I have uninterruptedly pursued from the first to the last patient I ever attended in the disease, amounting to a very large number; and my reason for giving the small dose of the calomel was, that large ones were rejected from the stomach, and I repeated it frequently because it was small, and that thus the action of the medicine on the stomach might be constantly kept up in a disease whose duration is to be counted by minutes. I gave the minute dose of the opiate to enable the stomach to retain the calomel, and prevent its too early descent into the bowels, and not as a sedative. I abstained from the use of all auxiliary treatment in my early cases, that I might not compromise the conclusion at which I desired to arrive—as to the remedial power of calomel; and I have uniformly avoided them since, because I found that calomel in doses small and frequently repeated was the alone remedy. I have never given stimulants in any form, because I found them not to be necessary, and believed they would prove pernicious when, from the long duration of the collapse, and the delay in commencing the treatment, consecutive fever might be feared; and lastly, I fixed no limit to the quantity of calomel which I gave than that which the duration of the collapse prescribed, having become early assured that pending its continuance no absorption of the calomel into the system takes place, and that whilst it is so given, no salivation or other inconvenience is induced by it, and that no extremity to which a patient may be reduced can justify our withholding or abandoning the use of it.—*Letter from Dr. Ayre, of Hull, to the President and Fellows of the Royal College of Physicians. (London Lancet.)*

PHYSIOLOGICAL SOCIETY OF LONDON.

Dr. WINN read a paper on the *Elasticity of Arteries considered as a cause of Animal Heat.*

About seventeen years since, whilst making some experiments with caoutchouc, he (Dr. Winn) was forcibly struck with the property it possesses of evolving heat when suddenly elongated, and was led at the time to infer the probability of other bodies being similarly endowed. The elastic coat of arteries, especially, appeared to be one of the substances likely to exhibit this calefactory principle, and in the event of this being the case, he thought it would not be unreasonable to conclude that the incessant contradictions and dilatations of the arteries during

life must form an efficient source of animal heat. Three years subsequently he was induced to resume the subject, and upon making an experiment with part of the aorta of a bullock, he was much gratified in being able to verify his previous conjecture. The experiment was performed as follows: Having cut off a circular portion of the descending arch of the aorta, above an inch in length, he laid it open, and carefully removed its external and internal coverings. He then pulled it to and fro with a continuous jerking motion (in imitation of the systole and diastole of the heart) for the space of about a minute. Immediately on discontinuing this movement, he placed it in the bulb of a thermometer, when he had the satisfaction of noticing, after a period of about two minutes, that the mercury had risen as many degrees. On removing the thermometer the heat diminished rapidly. To be certain that the increment of heat was not derived from any other source than that in question, he took the precaution of covering his finger with a double layer of flannel, to prevent the communication of heat from the body; he also covered his mouth with a handkerchief, to guard against the warm breath affecting the thermometer, whilst watching the progress of the experiment. It was also right to mention that the experiment was performed in a room without a fire, the temperature of the air being 55°. There were several difficulties to contend with during the investigation. The chief impediment appeared to be the moisture of the artery, which, by its evaporation, had a tendency to carry off a portion of the heat. However, by carefully drying the artery with a cloth, he succeeded in obviating this difficulty to a considerable extent, and was enabled to perform the experiment twice consecutively in a satisfactory manner. He had also, within the last fortnight, repeated the experiment in the presence of a medical friend with an equally satisfactory result. His attention was often arrested, whilst conducting the experiments, by other mechanical analogies between caoutchouc and the elastic coat of arteries. Like the former, the latter could be elongated to twice its ordinary length, and on suddenly stopping the tension, would return to its usual dimensions with considerable force and a snapping noise. From the preceding observations, Dr. Winn concluded that the generation of animal heat could now be fully and satisfactorily explained. Physiologists, after having clearly proved that a great portion of animal heat was the result of chemical changes in the blood, yet confessed that a residuum of heat could not be referred to this source; this residuum, he considered, arose from the mechanical action of the arteries. It would be exceedingly difficult to determine the precise quantity of heat given off during each beat of the artery; but if the development of only a very small quantity was admitted, it necessarily followed, from the circumstance of the action of the arteries being in incessant operation during life, that the heat must quickly accumulate to a great extent; and it is even probable that the body, unless cooled by the functions of the skin and lungs, would, in a short space of time, become preternaturally hot. The following physiological and pathological facts appeared to corroborate the views he had taken as to the mechanical source of heat: 1st. The minute distribution of the arteries to every part of the system ensured a general

and equal distribution of heat. 2d. The *rigidity* of the arteries in old age was a probable cause of the diminution of animal heat at the close of life. 3d. The increased warmth of the body after exercise seemed to be readily explicable upon the principle of increased force of the arteries. 4th. In many diseases of the lungs, when their functions were at fault, and at a time when the arteries were beating with great strength and velocity, the heat of the body was found to be above the usual standard. 5th. Medicines which diminished the action of the heart and arteries almost invariably reduced the temperature of the body. 6th. The heat of local inflammation, in cases where the constitution did not sympathize to any extent, cannot be satisfactorily referred to any other source, as the arteries immediately in the neighborhood of the affected part are often throbbing violently, when the capillaries, which are supposed to play so important a part in the chemical theory, are generally considered to have their action impeded. His (Dr. Winn's) friend, Dr. Crisp, has hinted that many cold-blooded animals are remarkable for the great elasticity of their arteries. This fact could not affect his theory. The languor of the circulation in this class of animals more than counterbalances any calefactory effect which might otherwise be produced by the resiliency of their arterial structure. With respect to the nature of the mechanical force he had been investigating, little could be said. It might possibly be a little molecular friction; it was clearly, however, of a different nature from ordinary friction, which had also been considered a cause of animal heat, but Dr. Winn thought erroneously so, inasmuch as there is found every where, on examining the mechanism of the human frame, that the most efficient means of defence have been provided against its effects, as seen in the various synovial and serous membranes, &c.

Dr. O. Ward remarked, that the restoration of animal heat on recovery from asphyxia was more easily explicable by the chemical theory of animal heat than by Dr. Winn's theory.

Dr. E. Smith considered that Dr. Winn had brought forward a certain amount of "positive information," which was so far entitled to consideration. He instanced the heat derived from blushing as a phenomenon which could not be explained satisfactorily by the chemical theory.

Dr. Snow gave Dr. Winn credit for having developed an entirely "new idea." He, however, reminded Dr. Winn that the only force upon which the dilatation of the arteries depended was derived from the heart.

Dr. Pavey instanced the remarkable accession of heat and redness on one side of the head and neck, produced by division of the sympathetic nerve on one side of the body. This experiment militated against the correctness of the prevalent theory of animal heat.

Dr. O'Connor said that blushing had been attributed by Dr. Burgess to the influence of nervous action.

Dr. M'Donald suggested that Dr. Winn's experiment would be more satisfactory if the artery were elongated by metal appliances than by the fingers.

Dr. Winn, in his reply, observed that Dr. Ward had forgotten that simultaneous with the restoration of the respiration, in the cases to which he had referred, was the renewal of the heart's action. Dr. Winn felt indebted to Drs. Smith and Pavey for their interesting observations on blushing, and the effect of dividing the sympathetic nerves—observations which strongly corroborated the truth of his (Dr. Winn's) theory.—*London Lancet.*

Upon the Pleasures and Advantages of a Knowledge of the Natural Sciences.

It is this training of the mind in correct methods of observation that gives the Natural History sciences so much value as instruments of preparation in professional education. Not unfrequently do we hear the short-sighted and narrow-minded ask, what is the use of zoology, or botany, or geology to the physician and surgeon? What have they to do with beasts, or plants, or stones? Is not their work among men, healing the sick? Of what use, save as remedies, can the creeping things, or the grass that grows upon the earth, or the minerals in the rock, be to the practisers of medicine? Vain and stupid questions all—yet they are sometimes put by persons who profess to promote the spread of education. We hear the same outcry on the literary side of teaching. What is the use of Greek and Latin? Can Greek make a man successful in bargaining, or Latin add to his riches? Why teach philosophy—the world is not for philosophers? What is rhetoric to the farmer? Who has not heard these questions asked over and over again? Yet always by professing advocates of education—practical education. They want something, but the best of them mistake the end for the means. The best want knowledge, but have not learnt that the mind must be trained ere it is prepared to gather and digest knowledge. They want science, but science turns mouldy and unwholesome in an unprepared mind. They forget, or do not know, that education consists chiefly in training, not in informing. That is instruction. At the same time, without a due mixture of instruction, education becomes insipid and distasteful to boyhood and youth. The older the pupil the more instruction must be mingled with the teaching. And when we are professionally educating young men, then the more science we can instil through our educatory lessons the better for them. Were the sciences so infused, to be entirely professional, we should warp and contract the minds. The tonic would be too strong—would not invigorate, but corrugate. We must counteract the natural tendency of purely professional studies—the tendency to limit the range of mental vision. We can do this most beneficially through the collateral sciences, which are sufficiently allied to the professional ones to prevent an undue dissipation of the student's thoughts, and at the same time are sufficiently different to give them a wider sphere of action. It is in this point of view that we should regard the Natural History sciences as branches of medical education. For my own part, after much intercourse with medical men who had studied at many seats of professional education, some collegiate, some exclusively professional, I have no hesitation in saying that, as a rule, the former

had the intellectual advantage. There are noble and notable exceptions, old and young ; but the rule is true in the main. — The man who had studied in a seat of learning, a college or university, has a wider range of sympathies, a more philosophical tone of mind, and a higher estimate of the objects of intellectual ambition than his fellow-practitioner, who, from his youth upwards, had concentrated his thoughts upon contractedly professional subjects of an hospital school. I will not believe that the practitioner of medicine, any more than the clergyman, or the lawyer, or the soldier, or the merchant, is wiser or better able to treat the offices of his calling, because his mind takes no note of subjects beyond the range of his professional pursuit. It is a great pleasure, both to patient and neighbor, to find in our doctor an enlightened friend—one who, whilst he does his duty ably and kindly, has a sympathy and an acquaintance with science, or literature, or art. Such men have gone forth in numbers from this University, and have done much to contribute to its fame. May there be many of them sent out for centuries to come. Of those who come here to study professionally, there are not a few who may some day find themselves isolated in distant and little-explored regions. Far away from friends and the conversation of intellectual companions, any pursuit which can engage and occupy the mind, and above all satisfy its thirst for truth by draughts from the pure and refreshing fountains of nature—any such pursuit becomes a blessing, and converts the desert into a paradise, one often filled with creatures yet to be named. How delightful does it then become to be able to recall the lessons of our student days, and casting away regret and languor, invigorate our minds by the practice of healthy intellectual exercise. Through no branch of knowledge can this be attained more easily and more excellently than through natural history.

In all directions around us the subjects for our study abound. We require few instruments, and those seldom of a costly character. A few books will serve as notes upon the great volume of nature, whose pages, after all, are the best manuals as well as the fullest cyclopædias. The cultivation of good, strong, straightforward common-sense—that sort which generates a logical frame of mind—is the best preparation, and one which is neither rare nor technical. Faith in science—a just but not blind trust in authority—a firm determination to be cautious and careful, and a resolute and patient spirit of perseverance—these are the qualities that will ensure success for our endeavors. Through them we may advance to discovery, if we have the will, power, and opportunity of doing original work. If our aims be less ambitious, we may, by turning them to good account in our study of animated and inanimated nature, exercise our minds in habits of minute and accurate observation, of systematic comparison, and of philosophical generalization. We shall find ourselves in the end to have gone through an education of a kind that can qualify us for the strife of life and the ways of men, far removed as they may seem from the subjects of our studies, and as surely prepared for scientific investigation of no light order. It matters little how few the facts studied may be, provided they were sufficient. It matters less whether the knowledge so acquired is useful, in the vulgar

sense of the term, or not. It matters much, very much, that we have gained in mental training, and that, through pursuing the line of study just indicated, we have become prepared for understanding the facts and phenomena of the world about us, and acquired a capacity to comprehend the laws and the three great kingdoms of nature.—*Inaugural Lecture, by Prof. Edward Forbes, of the University of Edinburgh.*

Edinburgh Monthly Journal of Medical Science.

Professor Owen's Opinions upon the Unity and Antiquity of the Human Race.

In conclusion, it only remains to offer a few words respecting the antiquity of the *quadrumana* and of man upon the surface of the earth. At the time of the demise of Baron Cuvier, in 1832, no evidence had been obtained of fossil *quadrumana*, and the baron supposed that both these and the *bimana* were of recent introduction. Soon after the loss of that great reconstructor of extinct species, evidence with regard to the fossil *quadrumana* was obtained from different quarters. In the oldest (*eocene*) tertiary deposits in Suffolk, specimens of jaws and teeth were found that unerringly indicated the former existence of a species of monkey of the genus *Macacus* (*Macacus eocenus*.) About the same time the tertiary deposits from the Himalayan mountains gave further evidence of the *quadrumana*, jaws, astragali, and some other parts of the skeleton, having been found completely petrified, and referable to the genus called *Semnopithecus*, which is now restricted to the Asiatic Continent. Dr. Lund discovered in Brazil remains of an extinct platyrrhine monkey, surpassing any known *cebus* or *mycetes* in size. Lastly, in the middle tertiary series in the south of France, was discovered a fragment of the lower jaw, proving that at that period some species of the long-armed ape (*Hylobates*) must have existed. But no human remains have been found in the regularly deposited layers of any of the divisions (not even the *pliocene*) of the tertiary series. Human bones have been found in doubtful positions, geologically considered, such as deserted mines and caves, but never in tranquil undisturbed deposits, participating in the mineral characters of the undoubted fossils of those deposits. The petrified negro skeletons in the calcareous concretes of Guadaloupe are of comparatively recent origin.

Thus, therefore, in reference both to the unity of man's species, and the fact of his being the latest, as he is the highest, of all animal forms upon our planet, the interpretations of God's works coincide with what has been revealed to us as to our own nature and origin in his Word. Of the nature of the creative acts by which the successive races of animals were called into being we are ignorant. But this we know, that, as the evidence of unity of plan testifies to the oneness of the Creator, so the modifications of the plan for different modes of existence illustrate the beneficence of the Designer. Those structures, moreover, which are at present incomprehensible, as adaptations to a special end, are made comprehensible on a higher principle, and a final purpose is gained in relation to human intelligence; for in the instances where the analogy of humanly invented machines fails to explain the structure of a divinely

created organ, such organ does not exist in vain, if its truer comprehension in relation to the Divine idea lead rational beings to a better conception of their own origin and Creator.—*London Med. Times.*

Lectures on Malformations of the Heart. By THOS. B. PEACOCK, M.D.

Cyanosis.—There are few subjects in the range of Medical Science which have occasioned more discussion than the inquiry as to the immediate cause of the discoloration of the surface, which forms so marked a feature in most instances of malformation of the heart. Morgagni, in describing the case to which I have before referred, ascribed the marked cyanosis which had been observed during life, to general congestion of the venous system, caused by the obstruction at the origin of the pulmonary artery. Dr. Hunter, on the contrary, seeing that in the case which he has related, the septum cordis was imperfect, so that the aorta was supplied from both ventricles, and that a large proportion of the blood circulating in the body must have been venous, supposed that the livid color the boy had presented during life, was owing to the intermixture of the currents of blood. These views have each since met with numerous supporters. The theory which ascribes the production of cyanosis chiefly to congestion of the venous system has been advocated by Ferrus and Louis in France, by Hasse and Rokanitsky in Germany, by Joy in this country, and very ably by Stillé in America. On the other hand, the view which refers the discoloration to the intermixture of the venous with the arterial blood, has, with various modifications, been supported by Gintrac and Bouillaud in France, by Meckel, in Germany, and by Farre, Paget, Williams and Hope. Corvisart and Laennec appear disposed to adopt the former explanation; and Dr. Chevers, while regarding the cyanosis as chiefly due to congestion, contends for the influence of the venous blood in the arteries, as modifying the intensity of the discoloration.

Gintrac, after a careful analysis of fifty-three cases of cyanosis, in all of which there was more or less intermixture of the currents of blood, inferred that the cyanosis was dependant on this cause, though he admitted that the intermixture was not always productive of cyanosis. Louis and Ferrus have dwelt more fully on the absence of any constant connection between the intermixture of the currents and the existence and intensity of cyanosis. Dr. Stillé, after a careful examination of a very extended series of cases of different forms of malformation of the heart, has shown that cyanosis may exist without the intermixture of the currents of blood; that there is no just proportion between the intensity of the cyanosis and the degree in which the blood is mixed; that complete intermixture of the blood may take place without cyanosis being produced; and that the variations in the extent, depth, and duration of the discoloration are inexplicable by the doctrine of the intermixture of blood. Of seventy-seven cases which he has collected and carefully analysed, he finds the condition of the pulmonary artery reported in sixty-two; and that in fifty-three of these it was contracted, obstructed, or impervious; while, in the remaining nine cases, there were other conditions present which would give rise to congestion of the venous system. He was therefore led to adopt the view of Morgagni

and Louis, and to infer that cyanosis is dependant either on obstruction at the pulmonic orifice, or some other cause, giving rise to venous congestion. Congestion, he contends, not only satisfactorily accounts for the discoloration of the skin and the dyspnœa, but that it is always present when cyanosis exists, and is never found without the occurrence of cyanosis, unless there are satisfactory reasons for its absence.

In the previous lectures I have alluded to various cases which bear out the inferences of Dr. Stillé. I have mentioned the case of a girl in whom an abnormal septum was found in the right ventricle, without any other malformation of the heart, and who was markedly cyanotic during the several months she was under my observation, affording striking proofs that cyanosis may exist without mixture of the currents of blood. Cases of this kind are, however, much less frequent than those which display a want of just relation between the intensity of cyanosis and the amount of intermixture. In the other case of abnormal septum, which I have mentioned as having fallen under my own notice, you will remember that the aorta rose in great part from the right ventricle, so that a very large proportion of the blood circulating through the body must have been venous; yet there was no evidence that the boy had presented any material degree of cyanosis till shortly before his death; indeed, he had been an inmate of the Royal Free Hospital, for an accident, about twelve months before, and nothing unusual in his appearance had then been observed, the occurrence of cyanosis having apparently been manifested after the pulmonary artery became the subject of disease, by which its capacity was still further diminished. In the case of Dr. Hale, in which there existed only one ventricle; and that of Dr. G. A. Rees, in which the pulmonary artery gave off the descending aorta, not the slightest lividity was observed; so that these cases evince that the freest intermixture may exist without giving rise to cyanosis.

The fact that cyanosis is not always observed where abnormal communications exist between the two sides of the heart, has been admitted by the supporters of the theory of intermixture, and various reasons have been assigned for its absence; and especially it has been contended, that, provided the pressure on the two sides be equal, no intermixture will take place, though either septum be defective. To this it may, however, be answered, that the cyanotic symptoms are by no means always congenital, though the freest intermixture of the currents of blood must have existed from birth.

Lastly, cases frequently occur in which the variation in the degree of lividity cannot depend on any corresponding variation in the amount of intermixture. I recently saw an infant which suffered at intervals from the usual symptoms which attend malformations of the heart. While the child was quite quiet, there was no appearance of cyanosis, but the paroxysms were readily brought on by exposure to cold, and a loud systolic murmur was heard over the whole front of the chest, and most distinctly to the left side of the middle of the sternum. Under a mild alterative treatment, the paroxysms became less frequent, and had, indeed, ceased entirely when the child, then three months old, took hoop-

ing-cough, attended with bronchitis, when they recurred with much greater severity. On examination after death, the folds of the tricuspid valve were found somewhat adherent together, much thickened and indurated, and studded with recent fibrinous deposits; the right ventricle was hypertrophied and dilated, and the pulmonary artery of large size. At the base of the septum of the ventricles there existed two apertures, leading from the left ventricle, immediately below the origin of the aorta, into the sinus of the right ventricle. These apertures were larger on the left than on the right side, so that it was evident that the current of blood which had passed through them must have flowed from the left ventricle to the right; and, from their small size, they could neither have given passage to a large current, nor, from their hard and unyielding edges, could the quantity transmitted have been liable to material variation. The cyanosis could not, therefore, have been owing to the venous blood entering the left ventricle, and so being circulated through the body. Neither could the variations in its intensity have been due to any corresponding variation in the amount of intermixture. The different degrees of congestion of the venous system, consequent upon the increased difficulty in the transmission of blood through the lungs, could alone explain the recurrence of the paroxysms. In this case, also, the left arm and hand were at all times very livid, and somewhat swollen; and no other explanation of the fact was offered by examination, than that the venous trunks on that side had been compressed by enlarged glands at the root of the the lung and in their course.

In cases in which, notwithstanding that the intermixture of the currents of blood must always have existed, the cyanosis does not appear till comparatively late in life, the period of its accession may generally be traced to the occurrence of disease either in the heart or lungs, by which the original source of obstruction is aggravated; thus, during a slight attack of rheumatism, inflammation may attack valves previously malformed, so as to curtail still further the size of the opening into the pulmonary artery, or right ventricle; or the aperture may be so rigid and unyielding, as not to expand sufficiently to transmit the increased current of blood, required with the progress of growth; or an attack of bronchitis, by adding obstruction in the lungs, to that which already existed in the heart, may cause the aggravation of cyanosis, if previously present, or create it, where it had not before been observed.

From these considerations, we are, I think, correct in inferring, that the cyanosis is due to congestion of the venous system. I cannot however, concur in the opinion of Lænnec, that the lividity in cases of malformation, differs in no degree from that which attends ordinary disease of the heart or lungs; and that, in some forms of affection of the lungs, the discoloration of the skin is as considerable, and as general as in cases of malformation. The cyanosis of malformation, when very marked, is much more intense than that from any other cause; but, occasionally, the lividity which attends pulmonary and cardiac disease is quite as intense as in some cases of malformation. In support of this I may instance the case of a boy, 17 years of age, who was a patient of mine at the

Royal Free Hospital in 1847, and had presented marked cyanosis from early life, yet in whom the discoloration was dependent on imperfect expansion of the lungs, connected with curvature of the spine, and the right ventricle was very greatly hypertrophied and dilated. That in cases of pulmonary and ordinary cardiac diseases the cyanosis is generally so much less intense than where the heart is malformed, must be ascribed to the amount of congestion being also less; for, in cases of acquired disease, were so small a proportion of blood submitted to the influence of the air, as in many cases of malformation, life could not be maintained. In cases of disease, also, the integuments generally become more or less œdematous, so that the lividity is masked.

Dr. Stillé's observations point too exclusively to contraction of the pulmonary orifice, as giving rise to the congestion on which the cyanosis is dependent. In the previous lectures, cases have been adduced in which the obstruction was caused by an abnormal septum in the right ventricle. An instance has just been mentioned in which it was dependent on the tricuspid valves; and, as before stated, it is sometimes caused by imperfect expansion of the lungs.

On the other hand, Dr. Chevers has shown, by reference to a case under the care of Dr. Lloyd, that great contraction of the orifice of the pulmonary artery, when it occurs in adult life, is not necessarily attended by any lividity. The case of Dr. Hamilton Roe, before mentioned, shows that cyanosis is not necessarily dependent on even great congenital contraction of the pulmonary orifice; while that described by Dr. Craigie, and one of my own, also, evince that the cyanosis, when present, does not always bear a strict relation to the amount of obstruction. In all exceptional cases of this kind, however, I believe it will be found that the right ventricle has acquired such an increase of power, as to enable it to overcome the difficulty in transmitting the blood through the contracted orifice. In my own case it is probable that the lividity had become less with the gradual diminution, during the progress of phthisis, of the amount of blood circulating in the body.

The inference to be drawn from the facts brought forward appears to be, that while obstruction to the flow of blood through the lungs, or from or into the right ventricle, giving rise to general venous congestion, is the essential cause of cyanosis, the intensity of the lividity, and its peculiar color, are modified by other circumstances.

1st. It is probably necessary to the production of intense cyanosis, that, as suggested by Dr. Chevers, the obstruction to the circulation should either have been present before birth, when the capillary vessels are naturally more capacious than in the adult; or, that it should have existed before the full development of the body was attained, and while the entire vascular system was more readily dilatable; or, at least, that it should have been of long duration, so that the capillary vessels have become greatly expanded.

2d. The peculiar tint presented by persons laboring under malformation appears to depend in some degree on the condition of the integuments. Where the peculiar blue or black color is observed, the skin is

usually very thin, and the body generally emaciated. Where the discoloration is rather of a deep rose tint, the patients are not much emaciated, or are even, in some cases, tolerably well nourished; and where the skin is pallid, there is either no material congestion, or it is masked by the œdematous condition of the integuments.

3d, and lastly. I cannot but think that the intensity and peculiar tint of the cyanosis must be much affected by the color of the blood in the vessels; so that where a very small proportion only is submitted to the influence of the air in the lungs, and the whole mass must therefore be of an unusually deep color, the general discoloration of the surface will be proportionally dark.—*London Med. Times.*

SHORT NOTICES OF HOSPITAL THERAPEUTICS.

To Prevent Night-sweats in Phthisis.—Night-perspirations in the course of phthisis are often extremely annoying to the patient; they appear, also, to be simply debilitating, and unattended by any degree of collateral benefit. Some cases which were carefully noted by Mr. Hutchinson, the Clinical Assistant at the City Hospital for Chest Diseases, with a view to the determination of that question, appeared to show that they may be artificially checked, not only with impunity, but with great benefit. The patients who were so treated, and who, in the course of a week or a fortnight, got quite rid of sweatings which for months had been profuse, thought themselves much better, and did not complain of increase, either as regards the expectoration, the feverishness, or the sense of stuffing in the chest. Under the usual treatment of phthisis, (full diet, cod-liver oil, and tonics,) the tendency to night-perspiration often ceases spontaneously. If it becomes desirable to expedite the process, it may be done by the sesquichloride of iron, the mineral acids, or, best of all, by the gallic acid. The following is the prescription for a night-draught containing the latter.—

R Acidi gallici. gr. vij.; morph. acet. gr. $\frac{1}{8}$; alcohol q. s. (a few drops); syr. tolutan. ʒss.; aquæ ʒj.

The night-pill, as we find in the Pharmacopœia of the Brompton Hospital for Consumption, is—

R Acid. gallic. gr. v.; morph. hydrochl. gr. $\frac{1}{8}$; mist. acac. q. s. Ft. pil. ij.

It is also of advantage to adopt an astringent regimen as far as convenient. The patient should be directed to sleep on a mattress, alone, and not heavily clothed; he should wear no flannel in bed; as dry a diet should be taken as conveniently can be borne, and fluid should be especially avoided in the latter half of the day, none whatever being allowed later than several hours before bed-time.

Treatment of Milk Abscess.—We alluded in terms of strong commendation, in a former report, to the plan of tonic medication in all cases of milk abscess, which is adopted by Mr. Paget at St. Bartholomew's Hospital. Very numerous cases of this affection, in all forms and stages, excepting perhaps the peracute, come under treatment in the out-patients' rooms of that Institution. Their subjects are generally cachectic

women. Mr. Paget always opens the abscess as soon as fluctuation can be felt, by an incision as small as possible, scrupulously abstains from squeezing, and orders a small poultice to be applied over the part where the skin is inflamed. Over the poultice a layer of cotton-wool is placed, and the whole slung to the neck in a handkerchief. A draught, containing quinine and the sulphate of iron, is ordered to be taken three times daily. Mr. Paget states, that, for many years, he has never, in a single case, had any trouble with fistulæ. We observe a great difference in practice among Hospital Surgeons as to making large or small incisions into mammary abscesses; some preferring very free openings, and others, like Mr. Paget, never making more than a mere puncture. On the whole, the latter mode appears to be the more successful; the constitutional treatment is doubtless, however, of the most importance.

Remedy for Favus.—From the observation of about a dozen cases of severe favus (diagnosis by the microscope in all) recently treated by Mr. Startin at the Hospital for Skin Diseases, we can speak with great confidence of the efficiency of the following ointment. It is the Ung. sulph. comp. of the Pharmacopœia of that Institution. R Sulph. sublimati lbss.; hydrarg. ammoniochloride. $\bar{3}$ ss.; hydr. sulphureti cum sulph. $\bar{3}$ ss. Leviga simul, dein adde olivæ olei $\bar{3}$ iv.; adipis recentis $\bar{3}$ xvj.; creosoti \mathfrak{m} xx.; misce. To correct the state of general health, Mr. Startin commonly orders simultaneously a mild course of the iodide of potassium, but this, we suspect, has but a small share, if any, in the local result. Often when the scalp has been for many years thickly covered with the peculiar favus crust, four or five nightly applications of the above ointment have sufficed to make it perfectly clean. So long as the patient will continue regularly to use a small quantity every day, the disease may be prevented from reappearing, and the condition assumed by the scalp under its influence might easily be mistaken by the inexperienced for one of complete cure. As soon, however, as theunction is suspended, the eruption reappears. This liability we have known, in more than one case, to extend over nearly a year, and probably it may for much longer periods. The ointment, however, which does not smell much, need only be applied at night, and may be washed entirely away every morning, so as to entail but little inconvenience on the patient. The hair will, to a considerable extent, grow during the treatment, provided that the scalp have not been too much destroyed. In a most disgusting disease, for which as yet no real cure is known, it is much to be in possession of an almost certain means of ensuring its absence. The ointment no doubt acts as a parasiticide. Before its first application it is desirable to clear away the crust as much as possible, either by fomentation or a poultice.

We may remark, that the ointment mentioned is used by Mr. Startin in the treatment of scabies, and also in that of the contagious form of porrigo.

Dilute Nitric Acid in Constitutional Syphilis.—A practical rule of great value in the management of the constitutional forms of syphilitic disease is, never to persevere with a remedy which, after a fair trial, produces no apparent benefit. It is a disease which, if the right treat-

ment be hit upon, generally yields with surprising rapidity. Another rule, which we observe most practical surgeons adopt, is, to change the remedy, if, after great improvement, the affection come to a stand-still or appear to retrograde. By ringing changes on the iodide of potassium, small doses of the bichloride, iodide, or biniodide of mercury, or the dilute nitric acid, much greater good may be done, than by the continuous employment of any one of these preparations. The dilute nitric acid is a drug which has a considerable reputation in this disease, but of which the exact effects have not been sufficiently investigated. Whether it acts merely as a tonic or alterative, or whether it has specific power over the disease, is yet a debated question. The following case, in which, after the iodide had failed, it produced effects which might seem to denote a specific influence, is worthy of narration. We epitomize it from the daily record kept by Mr. Edmonds, the dresser of the patients:

E. J., aged 20, a prostitute, was admitted into St. Thomas's, under Mr. Simon's care, on April 26, suffering severely from an eruption of ulcerating rupia, the large sores formed by which were scattered over the thighs, nates, and some other parts of the body. The disease had marked syphilitic characters, and she admitted having been salivated for the original affection one year previously. Mr. Simon ordered a meat diet, with eight ounces of wine daily; the sores to be dressed with a bichloride lotion (gr. ij. ad ℥j.), and a draught containing four grains of iodide of potassium dissolved in water, to be taken three times daily. These measures were continued for ten days without benefit, the patient meanwhile taking her food well. On May 6, some of the sores were decidedly increasing, and one of the larger was in a very sloughy state. The draught was now changed for R Acid. nitric. dilut. ℥xxv., syrupi ℥ij., quin. disulph. gr. ii., aquæ ℥j. The same lotion was continued, the quantity of wine increased to twelve ounces, and two eggs added to the daily allowance of food. A surprisingly rapid improvement ensued on this change of measures. The sores at once cleaned and commenced to heal. In the course of ten days several were almost cicatrized, and the patient is now so nearly well that she will shortly be discharged. It is possible, of course, that the quinine in this case, which was commenced simultaneously with the acid, had some share in the cure. As, however, a tonic regimen, with wine, had been pursued before, without the least benefit, it seems fair to attribute the chief influence to the latter.—*Lon. Med. Times.*

Dieffenbach's Operation for Ununited Fracture.—Mr. Mackenzie exhibited (to the Medico-Chirurgical Society of Edinburgh) a thigh-bone on which he had practised Dieffenbach's operation for the cure of ununited fracture, the drilling of the ends of the bone and the insertion of an ivory peg.

The patient, a seaman, had fractured his thigh between two and three years before he was admitted into the hospital under Mr. M.'s care. He was treated in a public hospital in America, and he attributed the want

of union to the limb not having been kept steady, the bandages confining the limb having been loosely applied.

The fracture was in the middle of the bone, and the lower fragment was retracted about an inch and a half on the inner side, and behind the upper. The limb was quite flexible at the seat of fracture, and was almost entirely useless as a means of support.

The ends of the bone were drilled with a small gouge worked by a carpenter's brace, and a peg, two and a half inches in length, was driven home with a hammer. The presence of the foreign body gave rise to such extensive inflammation and constitutional disturbance, that it was found necessary to remove it at the end of eight days. Profuse suppuration took place, undermining the whole deep textures of the thigh, and it seemed doubtful for some time whether the patient was not to sink from the effects of the operation. He rallied, however, and the suppuration gradually diminished. Firm osseous union took place, and at the end of some months the patient began to make use of the limb in walking. A sinus, however, continued to discharge matter at the seat of operation; and, after he had been walking for some weeks, he suffered from an attack of erythema of the limb; suppuration of the knee-joint followed, accompanied by hectic fever, and amputation was performed immediately above the seat of fracture.

The preparation showed the fractured ends firmly united by a large osseous deposit.

Mr. Mackenzie believed this was the only case in which Dieffenbach's method had been practised in Edinburgh. The result was not encouraging as regarded its further trial, at least in the thigh. A considerable amount of success had followed the practice, in ununited fractures of the leg and forearm, in the hands of the London hospital surgeons; but the only other case in which, as far as he could find, it had been attempted in the thigh, had proved equally unfortunate; he alluded to a case by Mr. Square of Plymouth, in which, as in the present case, it had been subsequently found necessary to perform amputation.—*Edinburg Monthly Journal of Medical Science.*

Retro-version and retro-flexion of the Uterus.

For these, Dr. Simpson relies on his stem-pessary. In a case just arrived from Aberdeen, the patient was placed deeply under the influence of chloroform, the misplacement clearly ascertained, and as the os tincæ would not admit the stem, it was freely incised in opposite directions. The patient was to return in a few days to have a pessary adapted to her case. I was much surprised at these bold operations upon the womb, and they go far to establish the position of Jobert, of Paris, that the os tincæ is insensible. The instrument used by Prof. S. for stricture of these parts, resembles the lithotome caché, the handle being much longer.

False Conception is readily detected by the relaxation produced in the abdominal muscles from the effect of chloroform.—*American Medical Monthly.*

Abstract of Meteorological Observations for May, 1854, made at Philadelphia, Pa. Latitude 39° 57' 28" N., Longitude 75° 10' 40" W. from Greenwich. By PROF. JAMES A. KIRKPATRICK.

1854. May.	BAROMETER.		THERMOM.		Dew Point 2 P. M.	Rain	Prevailing Winds.	General Remarks.
	Daily Mean	Mean Daily Range.	Daily Mean	Mean Daily Range				
	Inches.	Inches.	Deg.	Deg.	Deg.	Inch.	Points.	
1	29.833	.018	49.5	2.3	44.0		SW.	Clear.
2	29.767	.112	59.5	9.0	44.0	0.391	SW.	Cloudy.
3	29.630	.136	50.0	11.2	47.3	0.217	W.	Cloudy. <i>Barom. lowest 29.585 in.</i>
4	29.698	.072	53.5	5.5	46.0	0.303	N.	M. and aft. cloudy; ev. clear.
5	29.673	.082	60.0	8.5	48.7	0.018	SW.	Clear. Aft. showers.
6	29.682	.041	54.5	13.5	39.8		(Var.)	M. cloudy; aft. and ev. clear.
7	29.733	.073	46.0	8.7	26.7		W.	Clear. <i>Therm lowest 35°.</i>
8	29.741	.044	54.7	7.5	33.8		NW.	Clear.
9	29.753	.030	61.0	7.2	40.0		SW.	Aft. clear; m. and ev. cloudy.
10	29.724	.042	71.0	6.0	58.7	0.435	SE.	Cloudy. Thunder storm with hail.
11	29.804	.091	68.5	3.2	50.7	0.040	SW.	Cloudy.
12	30.036	.231	67.5	1.5	46.7		(Var.)	Clear.
13	30.135	.099	68.0	2.0	56.3	0.011	ESE.	M. and aft. cloudy; ev. clear. <i>Barom.</i>
14	30.033	.102	68.5	2.0	69.0	0.851	(Var.)	Cloudy. [<i>highest 30.153 in.</i>]
15	29.916	.083	71.5	3.0	64.0		SW.	M. and aft. cloudy; ev. clear.
16	29.949	.039	71.5	1.5	47.3	0.359	NE.	Clear. Dur. night of 15th. <i>rain, hail,</i>
17	29.859	.101	73.0	1.5	56.3	0.761	SSE.	Cloudy. [<i>thunder and lightning.</i>]
18	29.730	.129	75.0	2.3	58.7	0.024	SW.	Cloudy.
19	29.890	.161	69.0	3.7	47.7		SW.	Clear.
20	29.930	.039	69.5	1.5	41.7		(Var.)	Clear.
21	29.952	.037	61.5	6.8	59.3	0.434	(Var.)	M. and aft. cloudy; ev. clear.
22	30.005	.054	66.0	4.7	47.3		NE.	Clear.
23	30.117	.112	62.0	3.0	37.3		NE.	Clear.
24	30.070	.047	66.0	4.0	43.3		(Var.)	M. and aft. cloudy; ev. clear.
25	29.815	.255	65.0	4.7	68.7	2.548	SW.	Cloudy.
26	29.759	.079	69.5	5.7	42.0		NW.	Clear.
27	29.804	.078	66.0	3.3	49.3		NW.	Clear.
28	29.824	.032	71.0	3.7	53.0		(Var.)	Clear.
29	29.778	.051	73.5	2.5	51.7		ENE.	Cloudy. <i>Therm. highest 84°.</i>
30	29.687	.086	72.5	2.2	62.3	0.907	NE.	Cloudy.
31	29.953	.266	57.0	15.5	40.0		(Var.)	Cloudy.
Means for	1854	29.847	.091	64.3	5.1	49.1	7.299	S85°W14-100
	1853	29.888		63.1		49.3	5.170	
	1852	29.889		64.1		48.5	3.040	
	3years	29.875		63.8		49.0	5.170	S86½°W33.100.

The observations are made at 7 A.M., 2 P.M. and 9 P.M. The barometric mean is found by combining the three observations; the thermometric mean by combining the *lowest* for the day with the temperature at 2 P.M. The Dew Point is found by calculation from Mason's Hygrometer. The mean daily range of the barometer and thermometer is found by taking the mean of the differences between the observations of one and those of the corresponding hours of the preceding day. The barometric observations have all been corrected for temperature. The extreme range of the barometer during the month was 0.568 of an inch, and of the thermometer 49°. The resultant of the winds for the month is found by Schow's method.